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Plan for Moral and Ethical Decision-Making Program of Research

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Abstract

DRDC Toronto has an ongoing commitment to investigating moral and ethical decision-making (MEDM) in Canadian Forces (CF) operations. Several projects had been previously funded through the Technology Investment Fund (TIF) awarded to the research team from the Command Effectiveness and Behaviour (CEB) section. This work has recently been extended into a 3-year Applied Research Program to further explore MEDM in operational contexts. This report proposes research ideas that could be explored in the context of this 3-year Applied Research Program (ARP). This research agenda is driven by two compatible motives: (1) to remain systematic and theory oriented and (2) to contribute to the CF's operational readiness in the domain of MEDM.

The work on this research plan began with brainstorming a wide range of topics relevant to moral and ethical decision-making. Many of these topics derived from previous research exploring MEDM (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) and from focus group discussions with the DRDC Toronto MEDM Team. These research areas included person-based factors, team factors, contextual factors, situational factors, judgement and decision-making, emotion, and moral motivation and behaviour. Based on this initial "mapping" of the target domain, these broad areas were then narrowed to several focal areas, based on the following criteria: 1) their ability to contribute to the operational effectiveness of Canadian Forces; 2) their ability to contribute to the broader MEDM literature, and 3) on the skills and interests of the research team. Proposed focal areas include self-identity (person-based factor), team diversity (team factor), the role of collaborative processing (judgement and decision making), and the process of moral disengagement (moral motivation and behaviour). This report identifies potential research questions that could be explored in each focal area, as well as considering specific research approaches that could be used to explore MEDM in an operational context. Finally, this report outlines the expected outcomes of this research program.

Résumé

RDDC Toronto effectue en permanence des recherches sur la prise de décisions morales et éthiques (PDME) dans le cadre des opérations des Forces canadiennes (FC). Plusieurs projets ont déjà été financés par le biais du Fonds d'investissement technologique (FIT) octroyé à l'équipe de recherche de la Section de l'efficacité du commandement et du comportement (ECC). Ce travail a récemment été transformé en un Programme triennal de recherches appliquées (PRA) afin d'investiguer plus en profondeur la PDME dans des contextes opérationnels. Le présent rapport propose des idées de recherche qui pourraient être explorées dans le cadre du Programme triennal de recherches appliquées (PRA). Ce programme repose sur deux objectifs compatibles : (1) demeurer méthodique et axé sur la théorie; (2) participer à l'état de préparation opérationnelle des FC dans le domaine de la PDME.

Le travail sur ce plan de recherche a débuté par l'exploration de toute une panoplie de sujets sur la prise de décisions morales et éthiques. Nombre de ces sujets provenaient de recherches antérieures sur la PDME (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) et de groupes de discussion associés à l'équipe de la PDME de RDDC Toronto. Les domaines de recherche comprenaient les facteurs personnels, les facteurs collectifs, les facteurs contextuels, les facteurs circonstanciels, le jugement et la prise de décisions, l'émotion ainsi que la motivation et le comportement moral. Une fois établis, ces grands domaines ont été ramenés à plusieurs domaines d'intérêts plus petits, reposant sur les critères suivants : 1) leur capacité à participer à l'efficacité opérationnelle des Forces canadiennes; 2) leur capacité à participer à la documentation sur la PDME; 3) les compétences et les intérêts des membres de l'équipe de recherche. Les domaines de recherches proposés comprennent l'image de soi (facteur personnel), la diversité dans l'équipe (facteur collectif), le rôle du traitement coopératif (jugement et prise de décision) et le processus du désengagement moral (motivation et comportement moral). Ce rapport identifie les questions de recherche éventuelles susceptibles d'être explorées dans chaque domaine d'intérêt, de même qu'il tient compte des approches particulières pouvant être utilisées pour explorer la PDME dans un contexte opérationnel. Enfin, il met en lumière les résultats attendus du programme de recherche.

Executive Summary

DRDC Toronto has an ongoing commitment to investigating moral and ethical decision-making (MEDM) in Canadian Forces (CF) operations. Several projects had been previously funded through the Technology Investment Fund (TIF) awarded to the research team within the Command Effectiveness and Behaviour (CEB) section. This work has included a literature review (Thomson, Adams, and Sartori, 2005), in-depth interviews with experienced Canadian Forces officers who faced moral and ethical dilemmas in operations (Thomson, Adams, and Sartori, 2006a), and a field study investigating soldiers' moral and ethical decision making during a human rights violation scenario (Thomson and Adams, 2007). Other contracts have included a methodological review of relevant measures for moral and ethical judgement (Young and Baranski, 2003) and a review of moral and ethical decision-making focusing upon traditional and more recent judgment and decision making perspectives (Ancker and Weber, 2005).

The research team has recently been begun work on a 3-year Applied Research Program to further explore MEDM in operational contexts. This report proposes research ideas that could be explored in this 3-year Applied Research Program (ARP). On a theoretical level, it is important to advance our general knowledge regarding the process of MEDM, which should be understood as a multifaceted process that includes (but is not limited to) awareness, construal, judgement, decision-making, motivation, action, and post-interpretation. On a pragmatic level, this research program has the potential to advance knowledge and understanding within the CF as to optimal MEDM training for operations. This research agenda is driven by two compatible motives: (1) to remain systematic and theory oriented and (2) to contribute to the CF's operational readiness in the domain of MEDM.

This proposed research plan began with brainstorming a wide range of topics relevant to moral and ethical decision-making. Many of these topics derived from previous research exploring MEDM (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) and from focus group discussions with the DRDC Toronto MEDM Team. These research areas included person-based factors, team factors, contextual factors, situational factors, judgement and decision-making, emotion, and moral motivation and behaviour. Based on this initial "mapping" of the target domain, these broad areas were then narrowed to several focal areas, based on their ability to contribute to the operational effectiveness of Canadian Forces, ability to contribute to the broader MEDM literature, and on the skills and interests of the research team. Proposed focal areas include self-identity (person-based factor), team diversity (team factor), the role of collaborative processing (judgement and decision making), and the process of moral disengagement (moral motivation and behaviour). This report identifies potential research questions that could be explored in each focal area, as well as considering specific research approaches that could be used to explore MEDM in an operational context.

Several possible research efforts are examined. Proposed research initiatives include a literature review investigating culture and the impact of multinational teams on MEDM in an operational context, a series of field studies conducted during CF predeployment training at a specific Canadian Forces Base (CFB), a number of studies in the DRDC Toronto 1st person gaming laboratory, university-based laboratory studies, and a review of current CF training procedures relevant to MEDM.

Finally, this report outlines several outcomes of this research program that are expected in improve operational effectiveness. These include contributions to CF training mechanisms for MEDM in operations; contributing to scientific knowledge about MEDM; delivering experimental results in

academic journals (e.g., Military Psychology, Journal of Military Ethics) and at conferences (e.g. Canadian Conference on Ethical Leadership, International Symposium on Military Ethics); and maintaining and building relationships with relevant partners such as the Canadian Forces Leadership Institute (CFLI), Royal Military College (RMC), the Army Ethics Program (AEP), the Defence Ethics Program (DEP), and Carnegie-Mellon University.

Sommaire

RDDC Toronto effectue en permanence des recherches sur la prise de décisions morales et éthiques (PDME) dans le cadre des opérations des Forces canadiennes (FC). Plusieurs projets ont déjà été financés par le biais du Fonds d'investissement technologique (FIT) octroyé à l'équipe de recherche de la Section de l'efficacité du commandement et du comportement (ECC). Entre autres travaux, on a effectué une recherche documentaire (Thomson, Adams, and Sartori, 2005), réalisé des entrevues poussées avec des officiers expérimentés des Forces canadiennes qui ont été confrontés à des dilemmes moraux et éthiques lors d'opérations (Thomson, Adams, and Sartori, 2006a), et mené une étude sur le terrain de la prise de décisions morales et éthiques des soldats dans un scénario où les droits de la personne sont violés (Thomson and Adams, 2007). D'autres travaux ont porté sur une révision méthodologique de mesures pertinentes à l'égard du jugement moral et éthique (Young and Baranski, 2003) ainsi que sur un examen de la prise de décisions morales et éthiques, axé sur des points de vue traditionnels et récents du jugement et de la prise de décisions (Ancker and Weber, 2005).

L'équipe de recherche a récemment entrepris un programme triennal de recherches appliquées visant à investiguer plus en profondeur la PDME dans des contextes opérationnels. Le présent rapport propose des idées de recherche qui pourraient être explorées dans le cadre du Programme triennal de recherches appliquées (PRA). D'un point de vue théorique, il est important d'approfondir nos connaissances générales du processus de la PDME qu'il faut considérer comme un processus à volets multiples incluant (sans s'y limiter) la sensibilisation, la conception, le jugement, la prise de décisions, la motivation, l'action et la post-interprétation. D'un point de vue pragmatique, ce programme de recherche peut faire avancer la connaissance et la compréhension, au sein des FC, d'un entraînement optimal à la PDME en vue d'opérations. Ce programme de recherche repose sur deux objectifs compatibles : (1) demeurer méthodique et axé; (2) participer à l'état de préparation opérationnelle des FC dans le domaine de la PDME.

Le plan de recherche proposé a débuté par l'exploration de toute une panoplie de sujets sur la prise de décisions morales et éthiques. Nombre de ces sujets provenaient des recherches antérieures sur la PDME (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) et de groupes de discussion associés à l'équipe de la PDME de RDDC Toronto. Les domaines de recherche comprenaient les facteurs personnels, les facteurs collectifs, les facteurs contextuels, les facteurs circonstanciels, le jugement et la prise de décisions, l'émotion ainsi que la motivation et le comportement moral. Une fois établis, ces grands domaines ont été ramenés à plusieurs domaines d'intérêts plus petits, reposant sur leur capacité à participer à l'efficacité opérationnelle des Forces canadiennes, leur capacité à participer à la documentation sur la PDME, de même que sur les compétences et les intérêts des membres de l'équipe de recherche. Les domaines de recherches proposés comprennent l'image de soi (facteur personnel), la diversité dans l'équipe (facteur collectif), le rôle du traitement coopératif (jugement et prise de décision) et le processus du désengagement moral (motivation et comportement moral). Ce rapport identifie les questions de recherche éventuelles susceptibles d'être explorées dans chaque domaine d'intérêt, de même qu'il tient compte des approches particulières pouvant être utilisées pour explorer la PDME dans un contexte opérationnel.

Plusieurs efforts de recherche possibles sont examinés. Parmi les initiatives de recherche proposées, on trouve un examen documentaire de la culture et des répercussions des équipes multinationales sur la PDME dans un contexte opérationnel, une série d'études sur le terrain réalisées pendant un entraînement des FC préalable à un déploiement dans une base particulière des

Forces canadiennes, un certain nombre d'études dans le laboratoire de jeu à la première personne de RDDC Toronto, des études en laboratoires à l'université ainsi qu'un examen des procédures actuelles d'entraînement des FC ayant trait à la PDME.

Enfin, le rapport met en lumière plusieurs résultats du programme de recherche qui devraient améliorer l'efficacité opérationnelle, notamment des améliorations aux mécanismes d'entraînement des FC en matière de PDME dans le cadre d'opérations, des améliorations à la connaissance scientifique de la PDME, la divulgation des résultats d'expériences dans des revues spécialisées (p. ex., *Military Psychology*, *Journal of Military Ethics*) et lors de conférences (p. ex., Conférence canadienne sur la dimension éthique du leadership, Symposium international sur l'éthique militaire) ainsi que le maintien et l'établissement de relations avec des partenaires pertinents comme l'Institut de leadership des Forces canadiennes (ILFC), le Collège militaire royal (CMR), le Programme d'éthique de l'Armée de terre, le Programme d'éthique de la Défense et l'Université Carnegie-Mellon.

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1 Introduction

1.1 Background and Aim

The initial findings from previous work fulfilled under the Technology Investment Fund (TIF) for the Command Effectiveness and Behaviour (CEB) section at DRDC Toronto emphasize the sheer complexity of moral and ethical decision-making (MEDM). Several different projects have been funded through the TIF. These have included an extensive literature review (Thomson, Adams, and Sartori, 2005) and in-depth interviews with 15 serving and retired senior and general officers regarding moral and ethical dilemmas faced in operations (Thomson, Adams, and Sartori, 2006a). Other contracts have included a methodological review of relevant measures (Young and Baranski, 2003), and a review of moral and ethical decision-making from traditional and more current decision making perspectives (Ancker and Weber, 2005).

This program of research has recently received funding for an applied research program (ARP). The original ARP proposal identifies several milestones within the overall 3 year project. But, within such a program, there are many possible areas of focus. Similarly, from the perspective of the Canadian Forces, there are many different ways that research can contribute to a deeper understanding of MEDM in order to improve operational effectiveness. This document, therefore, is a first attempt at elaborating a research program that contributes to the Canadian Forces' operational readiness, while at the same time remaining systematic and theory driven. This report provides both general discussion and specific ideas about how the research program could be targeted. There are two equally relevant purposes of the overall research program:

- On a theoretical level, this program of research will work to advance general knowledge regarding the process of MEDM. MEDM can be understood as a multifaceted process that includes (but is not limited to) awareness, construal, judgement, decision-making, motivation, action, and post-interpretation. Currently, however, very little existing research has been conducted in chaotic and highly intense environments common in current military operations.
- On a pragmatic level, this research program aims to provide empirical research and knowledge that will contribute positively to improving operational effectiveness. Greater understanding of the issues faced by military personnel in making moral and ethical decisions will enable optimal MEDM training for Canadian Forces personnel.

1.2 Relevant CF/DND Trends

This research plan is being produced at a time of great change in terms of both CF transformation and the re-alignment of Defence Research and Development Canada Toronto to serve as a research branch to support the needs of the CF. There are a number of Canadian Forces and Department of National Defence (CF/DND) trends that are particularly relevant to the issue of MEDM. Several critical trends likely to influence this research program include:

Decentralized Command. The Army of Tomorrow Operating Concept is Adaptive Dispersed Operations, i.e., the ability to conduct coordinated, interdependent, full spectrum actions by small teams across the area of operations (*The Army of Tomorrow: Assessing Concepts, Capabilities*

For Land Operations Evolution, Directorate of Land Strategic Concepts). This approach has significant implications for the human dimension as it involves empowered soldiers who are given and accept a higher level of responsibility and accountability for a full spectrum of reactions to complex and sometimes rapidly changing circumstances, and greater initiative and lateral coordination by dispersed leaders. Similarly, the notion of mission command is central to the Army of Tomorrow concept. It is an approach that is based upon the exercise of local initiative within the framework of command intent. This is enabled by an appropriate decentralization of authority and responsibility that allows subordinate commanders the latitude to plan and conduct operations based upon their understanding of the local situation. Together with the emergence of enhanced technology and platforms that further enable distributed missions, this will mean that there is an increasing need for individuals at more junior levels of command to make decisions of all types, including moral and ethical decisions. The impact of decentralization is that people at all ranks may need to make decisions without the advanced leadership and operational experience that has traditionally provided the insight assumed to be needed to deal with complex ethical situations.

Increased Diversity. With the CF reflecting the demographics of Canadian society, increased team diversity has the potential to have significant implications for collaborative behaviour. How people work interdependently is a product of their background, their values, and the norms that guide their behaviour. Moreover, the increasing emphasis on the link between military efforts with other agencies (as represented by the JIMP framework) and on the 3D (defence, development and diplomacy) concept, individuals may be attached to more than one agency or body and may, therefore, need to balance multiple roles. In these situations, role conflict and ambiguity may be a serious challenge. Multiple attachments to a number of agencies could give rise to competing demands, such that when making decisions, individuals are at the intersection of several different organizational imperatives. Similarly, team members from diverse culture may define the nature of an ethical dilemma very differently, or differ in terms of their perception of the very existence of an ethical dilemma. The impact of this trend toward diversity in background, culture and role will be important to understand in more detail.

Increased Firepower and Use of Technology. Increased technological power enables greater levels of force with less equipment. This increased firepower, in particular the growing ability to inflict massive damage to combatants and non-combatants alike, safely and from great distances (Duty with Honor), including long-range precision weapons, using uninhabited weapons systems [e.g., swarming technologies with emergent behaviors], has the potential to give rise to ethical decisions concerning its use. Enhanced technological capabilities may provide increased access to the results of one's actions, literally changing the nature of MEDM in the CF of the future. For example, how ethical situations are construed "outside" the immediate situation (e.g., launching a surface missile from a frigate) may be very different from how they are seen "inside" the situation (e.g., being ordered to kill people in direct view). For example, our research has shown that ethical decisions made outside of operations may make strategic sense, but do not necessarily make sense to personnel on the ground (Thomson et al., 2005). As such, it will be important to consider the impact of technological power on MEDM.

DRDC Toronto Capabilities. We have also worked to ensure that this research plan is consistent with the Science and Technology challenges for which DRDC Toronto is currently responsible. These are divided into Core and Supporting challenges, as shown in Table 1.

Table 1: DRDC Toronto's Core Science and Technology Challenges

Core Science and Technology Challenges:
1. Strategies for promoting collaborative behaviour among teams, agencies, organizations, and societies
2. Monitoring, predicting and enhancing psycho-physiological readiness
3. Understanding, prediction and influence of adversary intent
4. Human systems integration
Supporting Science and Technology Challenges:
1. Enhanced decision-making in C2 environments
2. Effects-based visualization and awareness for the decision maker
3. Distributed, adaptable and on-demand learning, training and rehearsal
4. Diagnostic and adaptive systems for environmental stresses

MEDM is relevant in some way to several core S & T challenges. Working to understand strategies for promoting collaborative behaviour, for example, focuses on how to improve the ability of CF members to work effectively with other organizations, in distributed and/or culturally diverse team environments for both domestic and deployed operations (Essens, Vogelaar, Mylle, Blendell, Paris, Halpin, and Baranski, 2005). Because ethical foundations may vary within diverse teams, such teams may also face challenges in undertaking collaborative moral and ethical decision-making. In order to ensure maximal operational effectiveness, it will be critical to understand how teams can best work collaboratively in making decisions of this kind. MEDM is also implicated in the supporting S & T challenge related to enhanced decision-making in C2 environments. This challenge explores how decisions are made at a strategic level. Given that ethical decisions not only exist at all levels (tactical, operational and strategic), it will be important to further investigate how MEDM is likely to be performed collaboratively at all levels of command.

MEDM is also relevant to predicting and enhancing psycho-physiological readiness. Given that our previous interviews with senior and general CF personnel suggested a strong link between psychological well-being and MEDM, further understanding of the factors that influence MEDM has a potential to make a critical contribution in the area of psycho-physiological readiness. This ARP also has the potential to assist in the core challenge area of understanding adversarial intent. One way that this ARP might contribute here is through enhanced knowledge of how people in different cultures make moral and ethical decisions. For example, the decision to walk into a crowded marketplace and detonate a bomb has clear ethical components, and for people within our culture it is challenging to understand a system of values and beliefs that promotes and rewards actions that kill innocent people for a higher good. Working to explore the cultural determinants and their impact on psychological processes such as MEDM should be an important goal of this work. As a whole, then, this ARP has the potential to contribute to all 4 main challenge areas. Nonetheless, as this project is currently managed by the Collaborative Behaviour and Integrated Learning Section (CBIL), and as the notion of team decision making is increasingly integral to several aspects of the Chief of Defence Staff (CDS) vision for the CF (see http://www.cds.forces.gc.ca), and to more specific initiatives from the Directorate of Land Strategic Concepts (such as those emerging in *The Army of Tomorrow***)**, the decision was made to tailor the future of the MEDM research to be consistent with the aims of CBIL.

1.3 Current CF Approaches to MEDM

The Canadian Defence Ethics Program (DEP) was developed in the late 1990's in order to assist both DND and CF members to make moral and ethical decisions. This program has continued to grow and research has confirmed that this program has already exerted an impact in many domains within the CF.

For example, the DEP sponsored the Directorate of Human Resources Research and Evaluation (DHRRE) (now Directorate of Personnel Applied Research) to conduct a comprehensive baseline assessment of the ethical climate of the Department of National Defence (DND) and of the values used by DND members to make ethical decisions (Catano, Kelloway, and Adams-Roy, 2000). In order to evaluate the ethical values held by DND members, DHRRE developed an instrument called the Department of National Defence Ethical Questionnaire (DNDEQ), which measured respondent's views with respect to eleven indices: rules, care, independence, self-interest, job completion, supervisor expectations, supervisor behaviours, co-worker behaviours, organizational rules, organizational fairness, and personal control. CF respondents were asked to rate the ethical climate within the CF from two perspectives: "the way things are right now" and "the way things should be". The survey was distributed to 6,787 Military and Civilian personnel with responses returned by 42.1% of the sample.

Results from the survey provided insight into the ethical climate and values held by the members of the CF. On average, members of the CF responded that the active ethical values within the CF at the time of the survey fell far short of what they believed they should be (Catano et al., 2000). Specifically, the indices relating to care, self-interest, organizational rules, organizational fairness, rules and personal control had large discrepancies between the current and the ideal state, with the "current" state being consistently lower than the ideal.

In addition, the survey also measured various ideological bases incorporated into the DEP. The DEP recognizes five ideological foundations for ethical decision-making, which are based on rules, care, consequences, virtue, and self-interest (*Defence Ethics Handbook*, 1999). The ethics survey contained a number of questions relating to each of these in an effort to understand which foundations are used when making ethical decisions. A comparison of the five showed the predominant basis for both military and civilian respondents was virtue-based decision-making, followed by care-based, rule-based, consequence-based and self-interest-based decision-making (Catano et al., 2000).

Finally, respondents were asked to comment on the most important ethical issue in their workplace. Results indicated that both Military and Civilian respondents wanted to see virtues, such as courage, integrity, loyalty, honesty, fairness, and accountability, instilled in all members, and especially in their leaders (Catano et al., 2000). Respondents were also concerned with fairness, and noted specific problems associated with double standards.

Following the Defence Ethics Survey in 2000, DHRRE administered the 2003 Defence Ethics Survey. Similar to the 2000 Survey, the purpose of the 2003 Defence Ethics Survey was to assess the ethical decision-making of all CF/DND members. The assessment was based on four indicators: individual values; organizational ethical climate; approaches to ethical decision-making; and moral intensity of the situations. The results were provided to leaders at all levels of the CF and DND to assist them in ensuring that ethics are practiced in the CF and DND.

Comparisons between the 2000 and 2003 survey were generally positive. For example, results indicated that both military and civilian personnel saw an improvement in the organizational

climate during the period between the two surveys. Further, military and civilian personnel stated that they had greater ethical expectations for their organization in 2003 than in 2000.

Individual values and the organizational climate were again measured with the eleven indicators outlined above. Based on these factors, CF and DND personnel were asked to indicate how the current state of affairs is in their unit ("now") and how they believe it should be ("should"). Results found that organizational fairness, care of personnel, and co-workers' behaviour (i.e., the extent to which co-workers demonstrate DEP values) still showed large gaps between the "now" and "should" measures for both DND and CF personnel. As such, it is important that the CF and DND address these discrepancies between what personnel perceive things are currently and how they should be.

In addition to individual values and organizational climate, the 2003 Defence Ethics Survey again investigated the five ideological foundations outlined in the DEP for ethical decision-making. However, the 2003 Defence Ethics Survey added a sixth foundation, which is referred to as the multiple-approach. The existence of this approach recognizes that a single ethical ideology might not be adequate in many situations. Results indicated that the multiple-approach to ethical decision-making was the most commonly used across the six foundations for both CF and DND personnel. Respondents stated that the "right" way to approach ethical decision-making is not always clear and the approach is dependent on the time and the place. One approach to MEDM may be correct for one situation whereas another approach may be more effective in another situation. The results highlight the need for the CF and DND to ensure that the various approaches to MEDM are addressed in their initiatives and training.

Overall, the efforts of the DEP and the results of the DHRRE survey demonstrate that the defence community is actively engaged in understanding, assessing and enhancing the ethical climate of the organization. The specific findings of the 2003 Defence Ethics Survey are encouraging as many of the factors that influence MEDM can be positively influenced by the CF/DND through awareness, education and training. The results further indicate that a comprehensive approach to understanding ethical decision-making is critical to enhance the ability of CF members and DND employees to perform their duties at the highest ethical standards.

However, other studies continue to suggest the need for continuous renewal and development of the ethical guidelines and training, particularly in relation to its ability to provide guidance for MEDM in operational contexts. A study conducted by the CF's Major John Woodgate (2004) investigated the effectiveness of the DEP's MEDM model (see Table 2) in operational and non-operational contexts in comparison to two other military's models: the US Command and General Staff College (CGSC) and the Royal Netherlands Army (RNA).

Table 2: Defence Ethics Program model for MEDM

Step 1 Perception
↓
Step 2 Evaluation
↓
Step 3 Decision
↓
Step 4 Implementation of the decision

The CGSC model (see Table 3) was designed for U.S. Army members who find themselves in both operational and non-operational situations.

Table 3: The US Command and General Staff College (CGSC) model for MEDM

Step 1

Define the Problem

↓

Step 2

Know the relevant rules and values at stake

↓

Step 3

Develop and evaluate possible Courses of Action:

a. Does the COA violate an absolute obligation or prohibition?

↓

If *yes*, reject it; If *no*, consider criterion **b**.

↓

b. Do the circumstances favour one of the values in conflict?

↓

If *yes*, submit that value's COA to the criterion of c; If *no*, submit the COAs for all values at stake to criterion c

↓

c. If a COA has two effects, one good and the other evil. Do you intend the evil effect? Are you directly causing the evil effect as a means to achieve the desired good effect?

↓

If *yes* to either question, reject the COA; If *no*, consider criterion **d.**

↓

d. Are the expected good effects of the COA sufficient to compensate for allowing the negative effects?

↓

If *yes*, consider criterion **e;** If *no*, reject it

↓

e. Which COA best develops one's personal virtue/character?

↓

f. At this point, review your tentative choice of a COA. Does it pass the "gut check" test? Does it generally sit right with you? Would you be comfortable with having your decision appear in the newspaper or on the TV news reports?

↓

If *yes*, go to step **4;** If *no*, begin step **3** again.

↓

Step 4

Choose the COA that now appears to best represent the Army's values.

This model is used for instructional purposes at the US Army CGSC. Similarly, the RNA ethical decision-making model (see Table 4) was developed to assist with training of professional ethics and ethical decision-making in an operational context.

Table 4: The Royal Netherlands Army (RNA) model for MEDM

Step 1 What is the core problem? (Reformulate the core problem as a statement or question. In cases where there are several problems, list them in order of priority and then establish the core problem)
↓
Step 2 Who are the parties to the dilemma and what are their interests?
↓
Step 3 List the possible solutions and assess them on the basis of the following questions: a. Have I considered all interests of those involved and what priority have I accorded them? b. Which solution do I think is the most justified, and why? c. Is that solution legal?
↓
Step 4 Take a decision

Woodgate's (2004), position was that the RNA ethics program is particularly good because it includes both a professional military ethics code and a detailed model of MEDM.

Three case studies involving operational and non-operational moral dilemmas were used to test the effectiveness of the two models and DEP guidance. To analyze their effectiveness for providing assistance to MEDM, Woodgate (2004) initially examined the outcomes produced as a result of practical application of the three approaches. He observed that the CGSC and the RNA models were far easier to apply to the ethical problems and perhaps more accessible to a wider number of individuals than the detailed written guidance provided by the DEP. According to his analysis, the two models included a step-by-step process whereas the DEP guidance was not as straight forward and also required meticulous consultation and philosophical inquiry. Woodgate concluded that the process articulated in the DEP was too time-consuming for CF members, whereas, the CGSC and RNA provided simple questions to answers which helped guide the CF member to an appropriate decision.

To be fair, however, the application of the two models and the DEP guidance led to the same course of action (COA) for each of the three case studies and thus were equally effective in terms of outcomes. So, though time is often a critical factor in MEDM in operations and should be considered in understanding the process, Woodgate (2004) concluded that the effectiveness of each model to resolve moral quandaries must rely on two other criteria: clarification and evaluation.

Woodgate argued that the CGSC and the RNA models provided more effective guidance than the DEP model on how to clarify the operational problem. As well, though the DEP was effective in

determining the COA for the non-operational case study, the CGSC and RNA models provided more effective guidance for the operational scenarios than did the DEP approach. Woodgate (2004) concluded that the DEP approach did not provide sufficient guidance to effectively address dilemmas in an operational setting. Consistent with this, a separate interview study of CF commanders who faced moral and ethical dilemmas in operations during the 90s indicated they felt that the DEP and the Statement of Defence Ethics offered inadequate assistance for making moral and ethical decisions in a purely operational context (Thomson et al., 2006a).

The Land Force has recently stood up a new program, the Army Ethics Program (AEP), which is designed to put more specific operational focus on the underpinnings of the DEP. The commitment of the Army to the AEP stems from the need to address "the ethical imperatives demanded of combat operations" (Army Culture and Ethics: Army Ethics, 2006, http://www.army.forces.gc.ca/LF/English/5_10.asp). Whereas the DEP delineates the necessary principles and obligations that all CF personnel and civilian employees must follow, the AEP is particularly interested in operationalizing Army ethos at the unit-level, inculcating ethical awareness, ethical reasoning, ethical action, and most importantly ethical leadership. Indeed, "the AEP is founded on a values-based training philosophy that leads by personal example", and thus situates leadership at the forefront of its developmental framework. Through example and by providing "opportunities to make ethics awareness and dialogue an integral part of all activities" (Army Culture and Ethics: Army ethics, 2006, http://www.army.forces.gc.ca/LF/English/5_10.asp), leaders are ultimately accountable for fostering a healthy ethical climate within their particular unit to ensure operational effectiveness.

Implementation of the AEP has three requirements:

- The Director Army Training (DAT) develops and maintains Army trade specifications for ethics training, and validates Army ethics training modules within all leadership courses and DP training.
- All LF Command personnel (Regular, Civilian, and Reserve) complete the Army Ethics Programme (AEP) Annual Training Course, consisting of one professional development (PD) training day or a modular equivalent (400 minutes of instruction).
- The Army Ethics Coordinator (EC) community, consisting of Area Ethics Coordinators (AEC) and Unit Ethics Coordinators (UEC), executes the AEP, serves as a reporting agency to Land Staff, and functions as a feedback and mitigating mechanism for Land Staff to assess the ethical climate of the Army and redress ethical concerns. (Army Culture and Ethics: Army ethics, 2006)

The AEP also provides a help-line if army personnel or civilians have any questions about the Army Culture and Ethics Programme or if they wish to report an ethical violation or concern. Further, case studies are provided on the AEP website to help Army personnel identify ethical problems and understand how to deal with them. The case studies are broken down into the following four categories: junior leader, senior leader, civilian-military, and operations. These case studies recognize that all CF members at all ranks may confront moral and ethical dilemmas. For example, the case study "*Here we go or here we stay: what price human life?*" puts the MEDM in the hands of a Sgt. It begins,

> "*You are Sgt Fraser, the section commander of a forward Army OP unit monitoring a cease-fire line between warring factions under a NATO peacekeeping mandate. Your mission is to observe and report faction activity in your area and your Rules of Engagement (ROE) specify the use of lethal force only for the purpose of self-defence.*

During the night the cease-fire agreement collapses and the resulting hostilities trap some local farmers, including women and children, in the no-mans land between the front lines. The civilians are exposed to direct fire and may not last the night. It is within your capability to attempt a rescue."(Army Culture and Ethics: Army ethics, 2006, http://www.army.forces.gc.ca/LF/English/5_10.asp)

Following this, members are to consider two things. First, "*As Sgt Fraser, what is the 'right' thing to do?*" and second, "*What will each option mean for you and your soldiers?*" These and other case studies are examples of the Army's efforts to understand and promote MEDM in an operational context.

And there is also good evidence that this program has been well received. In the May 2006 edition of the "Maple Leaf", Major Rick Walker notes that the ethical scenarios have generated considerable attention and interest, with more than 1,000 people visiting the site and casting a vote indicating the optimal response to the ethical dilemma. Moreover, Walker notes that not only have people been contemplating the case studies, but often they directly ask for the "right answer" to the ethical dilemmas. However, he explains that these scenarios were meant only to be instructional, and not to offer the "right answer". These scenarios provide CF personnel with the opportunity to think critically about realistic moral and ethical decisions in an accessible and anonymous format. Moreover, this movement toward an increasing operational focus in MEDM is also very encouraging.

1.4 Summary

This chapter outlined some of the initiatives that CF/DND have taken in the area of MEDM. As the efforts above attest, the CF has expended considerable time and energy in creating a climate that demands high ethical conduct in its personnel. As a civic institution, the CF has clearly worked to align its organizational ethical culture with Canadian ethics and attitudes and values. A research program investigating MEDM, therefore, needs to accommodate and align itself with the most recent CF advances in this domain and to pursue research goals that are consistent with what the CF view as their most fundamental values and needs. As such, a research program for MEDM in CF operations must be highly pragmatic in light of operational realities and must contribute to CF operational readiness and effectiveness. Moreover, the research program needs to be systematic and centred on the current trends of the CF and DND, which include decentralized command, increased diversity, increased firepower and use of technology. Taking this into account, the following chapter delineates a number of general areas of focus in the MEDM literature, and assesses their potential for contributing to the CF.

2 Potential Areas of Focus

This chapter considers the wide range of topics related to moral and ethical decision-making (MEDM), and assesses their potential for contributing to the CF. The early stages of creating this research program plan centred on brainstorming the various areas of MEDM using a software application called *MindMap*. Based on the past research initiatives (Thomson et al., 2005; Thomson et al., 2006a; Thomson et al., 2007) and focus group discussions with the DRDC Toronto MEDM research team convened on 7 June, 2006, we identified a broad framework of the factors impacting on MEDM. These factors are categorized in terms of person-based, team, contextual, situational, and judgement/decision-making sets. Within each of these areas, relevant constructs prominent in the research and theoretical work relevant to MEDM are presented.

It is important to note that the factors indicated in the *MindMap* are selective rather than exhaustive, and the *MindMap* is currently geared toward the perceived needs of the CF in this area and the interests of the research team. However, this broad framework should be a "living" document, so that the framework can be continually revised (e.g., elements added) as the research program learns more about MEDM in operational contexts, and as the needs of the CF change due to ongoing transformation efforts.

The following sections in this chapter explore each set of factors influencing MEDM in turn and the primary factors within each set before narrowing to propose a core area of focus for future research. These proposed focal areas include the impact of self identity (person-based factor), team diversity (team factors), the role of collaborative processing on MEDM (judgement/decision-making), and the link between moral motivation and behaviour (including the mechanisms of moral disengagement). Within this focus area, a selective sample of relevant research in the area is presented and potential research questions that could be explored in the applied research program are raised.

2.1 Person-based factors

Person-based factors can be categorized into three main groups: attitudes and values, individual differences and self-identity, as shown in Figure 1. These factors are described further in the sections that follow.

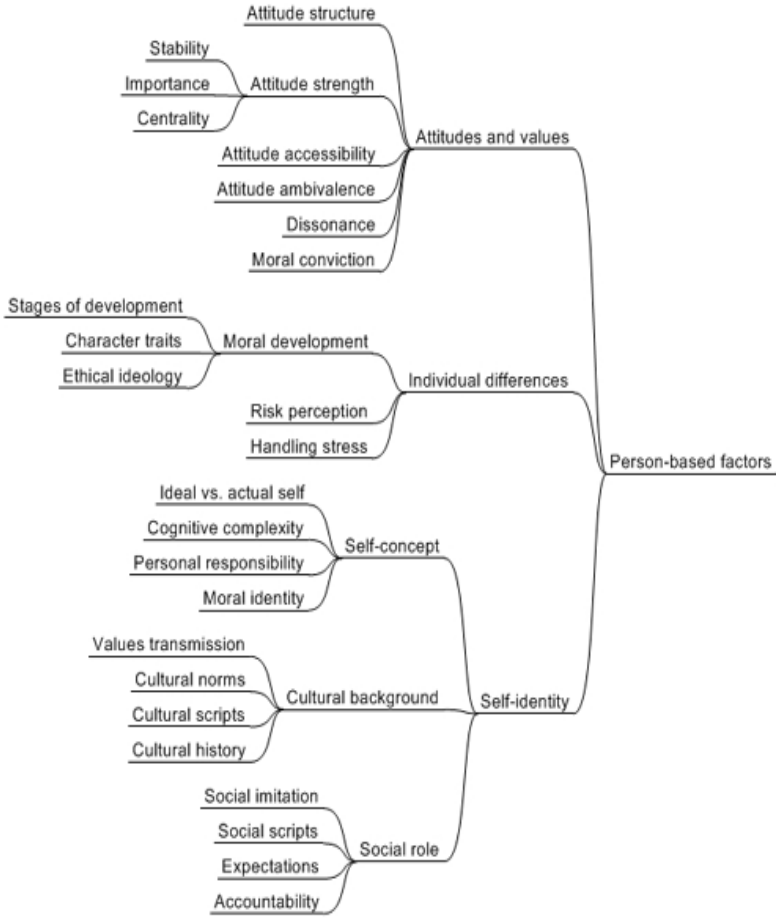

Figure 1: Person-based factors

Attitudes and values. Attitudes and values clearly impact on MEDM. Ajzen (2001, p. 28) defines an attitude as "a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likeable-dislikeable". Attitudes can be understood in terms of their structure, strength and their accessibility. Attitudes toward a given object can be multi-dimensional, as is evident in constructs related to attitude ambivalence and dissonance. Attitudes provide both an orienting function and an interpretative filter through which people see the world (Eagly and Chaiken, 1993). Some of the most critical attitudes focus on personal evaluations about what is right and wrong. As such, attitudes have a strong link with MEDM. One such attitude noted in the literature of particular relevance to MEDM is moral conviction.

Traditionally, moral conviction has been conceptualized simply as an attitude toward a moral issue. However, some (e.g., Stitka, Bauman, and Sargis, 2005) have argued that moral convictions are different than other non-moral attitudes and not simply a particular kind of attitude with specific features (e.g. strength, importance and centrality). Instead, moral convictions are argued to have stronger associations with behaviour than non-moral attitudes because they are experienced as facts about the world; they have motivational force; they are the justification for action; and they are accompanied by strong emotions, such as fear, anger, guilt and shame (Stitka et al., 2005).

Although non-moral attitudes may also have an affective component, these non-moral emotions lack the intensity level of moral convictions (Stitka et al, 2005). Stitka and Mullen (2002, p. 36) define moral conviction as "an unshakeable belief in something without needing proof or evidence…a strong and absolute belief that something is right or wrong, moral or immoral". As such, moral convictions carry "a strong motivational component because they are 'oughts' or 'shoulds' that are closely connected to people's sense of themselves as fundamentally decent and good people" (Higgins, 1987; cited in Stitka & Mullen, 2002, p. 36). And these moral convictions can, in turn, become "moral mandates", i.e., "a selective self-expressive stand on a specific issue" (Stitka, 2002).

Relevant research has explored the relationship between moral convictions and moral mandates, the latter defined as a strong moral attitude or belief that includes a high degree of motivational force because it is an absolute "ought" in the mind of the individual possessing the mandate. When people respond to an event with moral conviction, they are thought to reaffirm their beliefs as moral and good (Skitka et al., 2005). This can be done by either adopting moral mandates related to either prosocial behaviours (e.g., being even more committed to helping others) or by punishing or denigrating those that have behaved immorally. Moreover, people with strong moral convictions are often subject to the "moral mandate effect" (MME). The "moral mandate effect" is prominent when people have strong moral convictions tied to their core values, and it is expressed when people care more about simply achieving the outcome that supports or violates their moral mandate than they care about the procedural fairness of working toward the outcome (Skitka et al., 2005). In research exploring the controversial case of a Cuban boy (Elian Gonzalez) requesting political asylum in the United States, for example, participants' pre-decisional moral convictions were more influential in their satisfaction with the outcome of the case than was the perceived fairness of the process by which the case was decided (Skitka and Mullen, 2002). In addition, there is also some evidence suggesting that this willingness to forego fairness concerns may occur because violations of a moral mandate can lead to a strong, angry emotion specifically associated with the outcome (Skitka et al., 2005) that makes people may be more likely to disregard procedural protections and due process (Stitka and Mullen, 2002). Moral mandates, in theory, could lead to the legitimization of any procedures, including extreme actions, such as terrorism or political executions, so long as the mandated end is achieved. Put another way, when moral conviction is high, obtaining the "right" outcome is sometimes more important than procedural fairness implicated in achieving the outcome. In this sense, moral conviction has the potential to be both helpful (when it inspires prosocial behaviour) or problematic (when it makes unfairness seem acceptable). A greater understanding of strong moral convictions, then, would contribute to a better understanding of MEDM.

Individual differences. Many individual differences will likely shape the process of MEDM, but none more radically than one's moral development. Early accounts of this process focused on cognitive-development models that emphasized the sophistication of one's moral reasoning as the primary predictor of moral behaviour (e.g., Kohlberg and Hersh, 1977). In short, Kohlberg has suggested that moral development moves successively through multiple stages, coinciding with the progression of moral values (Kohlberg et al., 1977). In the pre-conventional stage, moral reasoning develops first around avoiding punishment and secondly around addressing one's own needs and desires. Individuals are motivated to act or not act based on external rewards and punishments. In the conventional stage (characteristic of most people in society), moral reasoning develops around avoiding the rejection or disapproval of others, and then around adherence to laws and obligations. This stage of moral reasoning is consistent with the compliance-based approach found above, and therefore, carries the same criticisms. In the final stage, post-conventional, moral reasoning stems

from mutuality and interest in the wellbeing of others, and then stems from one's own principled judgement of right and wrong, or one's own moral conscience. At this stage, actions are guided by universal principles.

However, the construct of moral functioning (based largely on the work of Lawrence Kohlberg) has also been roundly criticized because it leaves moral motivation in the realm of pure moral understanding (Blasi, 2004, 2005). The shortcoming of this approach is that *knowledge* of the rightness or wrongness of an action may not necessarily entail moral behaviour. That is to say, mere knowledge of what is right is not necessarily an adequate predictor of actually doing the right thing (e.g., Bandura, 2002). This recognition has lead theorists and researchers to seek different ways of understanding how individuals come to behave morally.

In addition, individual difference factors such as the Big 5 personality factors (Costa and McCrae, 1992), self-esteem (Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J. and Schimel, J., 2004), need for structure (Neuberg, West, Judice and Thompson, 1997), locus of control (Rotter, 1966), emotional intelligence (Salovey and Grewal, 2005), Right Wing Authoritarian (Altemeyer, 1981, 1988), and Social Dominance Orientation (Pratto, Sidanius, Stallworth, and Malle, 1994) also have potential to impact MEDM.

2.1.1 Proposed area of focus – Self and social identity

As shown in Figure 1, identity can be broadly conceptualized as comprising a number of elements, including self-concept, cultural background, and social role. All of these will play a profound role in the way individuals construct their self and social identity.

Self-identity. According to Baumeister and Muraven (1996, p. 406), self-identity is "a set of meaningful definitions that are ascribed or attached to the self, including social roles, reputation, a structure of values and priorities, and a conception of one's potentiality", i.e., a conception of what one might become in terms of emerging capabilities and competencies. This definition underscores both the multidimensional and constructive nature of self-identity. Self-identity is actively created by individuals as they move through their world and get feedback from other people and from their experiences. Indeed, as people create their own identities, moral and ethical concerns would naturally play a role.

Broader approaches to understanding MEDM have often emphasized the power of identity as an influence on morality. This interest has arisen, in part, because conventional ways of understanding moral behaviour (e.g., moral understanding and moral emotion) have proven largely inadequate (Hardy and Carlo, 2005). Indeed, self-identity has received increasing focus in the literature as a fundamental component of moral functioning. For the most part, the terms "self-identity" and "moral identity" have been used wholly interchangeably (e.g., Hardy, 2005). However, some researchers have argued that the term moral identity should be used rather than self-identity, as being moral is not a critical and necessary part of a person's self definition (Aquino and Reed, 2002). Perhaps a reasonable resolution is to call this construct either moral identity or self-identity that specifically pertains to the moral domain.

Research and theory suggest that those who view morality as central to their sense of self may be more motivated to behave consistently with their moral beliefs. Blasi's conceptualization of identity is the most elaborated in the literature. He holds that an adequate account of moral functioning must include not only moral understanding but must also "…be integrated in the overall personality system" (Blasi, 2004, p. 336). In this sense, according to his "self model" of

moral functioning, moral functioning is not simply a product of what the individual knows, but is indicative of the individual's broader moral character.

According to Blasi (2005) an individual's constructed self-identity is based on three interconnected constructs (moral will, self-control and integrity) that comprise moral character. Briefly, the first component in moral functioning is recognizing that one has the capacity or the moral will to choose moral desires over other non-moral desires. Seeing the consequences arising from the fulfilment of the former, self-control is more likely to be exerted and choices are increasingly structured around the "moral good". This moral will, as Blasi (2005) explains, is central to moral functioning because it not only gives moral meaning to moral character it also provides a motivational drive. This act of choosing moral desires over non-moral desires promotes the development of a self-identity in which morality and pursuing the good are central. The motivational drive arises from an impetus to reflect or model our ideal self-identity in our intentions and behaviour. The final and most significant aspect of Blasi's self-identity construct, therefore, is integrity. This refers to "a person's serious concern for the unity of his or her subjective sense of self, as manifested in consistency with one's chosen commitments", i.e., "the conscious, intentional pursuit of this ideal unity" (Blasi, 2005, p. 90 – 91). The failure to act consistently with one's commitment to morality might lead to a detachment from his/her core, induce emotional discomfort, and potentially lead to a break-up in a unified sense of self. It is argued, however, that when morality is actually at the core of one's self-identity, the associated moral beliefs act as a motivational force, bridging the span between moral judgement and moral action (Blasi, 2005). As such, a strong and integrated self-identity is the underpinning of the judgement/action link within the moral domain. Moreover, Blasi also emphasizes the importance of both objective identity content as well as the subjective experience associated with identity. As such, he argues that maturing identity is associated with increasingly internal identity considerations (i.e., more focus on values and goals) and decreasing external concerns (e.g., how others might see us). During maturation, the aspects that are most critical to us as an individual are increasingly closer to our core identities, making us even more responsible to sustain this chosen sense of self.

For Aquino and Reed, moral identity is trait-based, as it is associated with certain beliefs, attitudes and behaviours that revolve around a subset of moral traits (caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind) which are all part of a connected network (Aquino and Reed, 2002; Blasi, 1984). Not all people will show the same traits, and people need not manifest all traits at one time, but individuals will show varying degrees of these traits based on individual differences and situations. Moreover, they argue that people define themselves, in part, in terms of the social groups with which they identify (e.g., vocational, ethnic or religious groups), and that people tend to organize their trait-based definitions of morality around these specific social referents. These social referents "could be a real membership group (e.g., fellow Peace Corp volunteers), an abstract ideal (e.g., God), a known individual (e.g., a mentor), an unknown individual (e.g., Mother Theresa) – or any social construction". Like Blasi, they argue that the link between moral identity and moral behaviour is promoted when "a person views certain moral traits as being essential to his or her self-concept" (Aquino and Reed, p. 1425) and is strengthened by the salience of moral exemplars (e.g., Mother Theresa) that presumably provide additional impetus to stay true to one's moral identity. As such, this theory links self-concept with the social identities that one wishes to adopt.

Similarly, Hardy and Carlo (2005, p. 232) argue that "a person has a moral identity to the extent that he or she has constructed his or her sense of self around moral concerns". And, Hardy (in press, p. 1) argues that moral identity relates to "values, actions, goals and roles". Hardy and Carlo (2005, p. 234) argue that "when morality is important and central to one's sense of self and

identity, it heightens one's sense of obligation and responsibility to live with moral concerns". For example, moral identity is argued to be implicated if moral activities (such as helping at a blood clinic) are central to one's sense of self.

There is also some emphasis in the literature about the importance of understanding the process of moral identity development (Hardy and Carlo, 2005). A prominent model developed by Hart (in press; cited in Hardy and Carlo, 2005) postulates that moral development is a product of 5 factors (see Table 4).

Table 5: Factors in a model of moral identity development (Hart, 2005)

Layer	Active Factors
First layer – stable and resistant to change	Personality Social structure (e.g., SES)
Second layer – malleable and more controlled by individual	Moral cognitions (moral judgement and attitudes) Self and identity Opportunities for moral action

In short, this model argues that the first layer factors influence moral development both directly and indirectly, through their influence on factors in the second layer. At the first layer, personality factors and one's social structure work to influence moral development. These factors are seen as relatively difficult to change. At the second layer, however, moral cognitions, identity, and opportunities for moral action are much more within an individual's control. The ability to exercise one's morality is dependent on identifying appropriate opportunities to do so.

One of the reasons that researchers have been interested in the moral identity construct is that moral identity should be able to predict ethical motivation and behaviour. Blasi (1995, p. 233-234; cited in Hardy et al., 2005) has argued that when moral identity is active, moral concerns are "integrated with one's motivational and emotional systems; are made the agentic processes, including responsibility; and are finally taken as a basis for the construction of one's self-concept and identity". In fact, Hardy and Carlo (2005, p. 234) have argued that identity "provides a boost beyond the motivation available from moral understanding and moral emotion alone; in this sense, it is useful in explaining extraordinary moral action and enduring moral commitment".

However, it is also critical to explore the actual power of the moral identity construct to explain moral behaviour. In this area, unfortunately, definitive research is absent. According to Hardy and Carlo (2005, p. 239), "the fact is that we have very little empirical research that has directly investigated and validated the moral identity construct". The work that does exist, they argue, falls into 3 primary categories, including the impact of moral exemplars, research directly exploring the motivation/behaviour relationship and other relevant research.

First, the moral exemplar literature has typically explored morality by examining the lives of individuals who devoted their lives to moral causes, with typical representatives being Martin Luther King, Mother Theresa or Mahatma Ghandi, as these individuals represent a very advanced fusion of self and morality (Hardy et al., 2005). It is important to note, however, that moral exemplars are not just public figures. Indeed, Walker, Pitts, Hennig, and Matsuba (1995) conducted interviews with participants investigating a number of moral constructs, including identification with moral exemplars. They found that the most frequent categories of moral exemplars were friends and family, and not public figures such as Martin Luther King. They explained that this was

because participants viewed integrity as a critical character trait defining moral excellence, and participants argued that the best way of measuring this was through personal relationships.

There is some evidence that the power of exemplars may lie in the goals and traits that they endorse. Some research, for example, compared self-ratings of adolescent moral exemplars (nominated by community leaders) and adolescent non-exemplars on a variety of goals and personality descriptions. It showed that the exemplars endorsed more moral goals and moral personality traits in describing themselves than did non-exemplars (Hart and Fegley, 1995; cited in Hardy et al., 2005). This suggests the potentially critical role of self-definition in moral action.

Another wide body of academic literature that is potentially relevant to understanding the influence of exemplars on identity development pertains to the influence of role models. A series of studies by Lockwood and colleagues, for example, have explored the conditions under which role models inspire or inhibit motivation and self-evaluations (e.g., Lockwood and Kunda, 1997; Lockwood and Kunda, 1999). Although one might believe that exposure to highly capable exemplars might inspire one to push oneself even harder, this is not always the case. In fact, self-relevant high-achieving exemplars can actually diminish rather than promote one's own motivation, perhaps by highlighting deficiencies in oneself. Motivation can also be undermined (and self-evaluations become more negative) when presented with high-achieving exemplars, even when one's "best possible self" is active (Lockwood and Kunda, 1999).

Although this line of research does not explore the moral domain, it is important because current theorizing about moral exemplars (e.g., Hardy and Carlo, 2005) seems to cast moral exemplars as likely to have a uniformly positive role. However, the Lockwood research suggests that the impact of role models is not necessarily always positive. Extrapolating to the moral domain, then, the actual role of moral exemplars in inspiring or de-motivating individuals may depend on the self-identity of the target individual and on the self-relevance of the moral role model or exemplar. Therefore, because role models are likely play a large part in the moral development of soldiers as they move through the CF, the impact of moral exemplars could be an important research focus.

A larger body of research has explored moral identity as a predictor of moral behaviour. Some of this research has focused on measuring moral identification or the degree to which people endorse moral rather than non-moral virtues. If it is a valid construct, then good measures of moral identity should predict moral behaviour. Aquino and Reed (2002, p. 1427) found people who score higher on a symbolization measure of moral identity (i.e., "the degree to which the traits are reflected in the respondent's actions in the world") were more likely to report higher levels of perceived intrinsic satisfaction with their volunteer activities. Moreover, people who scored higher on internalization measures (i.e., "the degree to which the moral traits are central to the self-concept") of moral identity were more likely to report having freely chosen to engage in such activities (Aquino et al., 2002). Similar effects have also been shown in relation to donation behaviour, as people with more strongly internalized moral identity were more likely to donate food than those who did not. This research shows the potential predictive power of moral identity on moral behaviour.

Further research by Reed and Aquino (2003) showed that moral identity can help explain the attitudes and behaviours of people who respond less negatively towards out-groups during inter-group conflict. The "moral regard hypothesis" argues that when moral identity is high, people are likely to be more inclusive when considering others and to show less in-group bias and less out-group hostility (Reed et al., 2003). In terms of actual behaviour, moral identity should also predict willingness to exchange resources with a stranger. In order to test the hypotheses, they used their instrument that taps the two aspects of identity mentioned above, i.e., the degree to which moral

traits are central to one's self-identity (internalization) and the degree to which one acts consistently with these particular moral traits in the public domain (symbolization). Results indicated that the higher a person's self-importance of moral identity, the more likely they are to report a strong moral obligation toward a variety of out-groups (Reed et al., 2003). High internalization of moral traits predicted the degree of reported moral obligation toward out-groups. However, this effect was only shown for the internalization dimension of moral identity. The study also revealed that participants who scored higher on the internalization scale felt more obligated to exchange resources with strangers. Specifically, those high and low on internalization did not differ in their perceived moral obligations to exchange resources with a friend; however, they differed significantly in their felt obligation to exchange these resources with a stranger, with high moral identifiers feeling more obligated than low identifiers (Reed et al., 2003). This research shows an important link between moral identity and judgement/behaviour toward other people, especially when they are members of an out-group or are strangers.

Other research has looked longitudinally at the relationship between moral self-identity and moral behaviour. Work by Pratt, Hunsberger, Pancer and Alisat (2003) asked late adolescents to rate 12 values (6 moral and 6 non-moral) in terms of their importance to their lives. Outcome measures included a community involvement scale, rating community and helping activities. Both measures were administered at the start of the study and again after 2 years. Results showed that moral identity significantly predicted community involvement at both the start and end of the study. Additional analyses showed that after controlling for early community involvement, moral identity at the start did not significantly predict involvement at the end of the study. However, community involvement at the start did predict levels of moral identity at the end of the study. This provides some evidence that involvement may actually have been an influence on the development of moral identity for these adolescents. However, it is not clear whether the effects seen in this study will extend beyond maturing adults working to define themselves.

Despite this important work, many critical questions about the relationship between moral identity and behaviour remain. First, the exact nature of the causal link between these constructs will be critical to explore in more detail (Hardy et al., 2005). Although moral identity is perhaps most commonly viewed as an antecedent to moral behaviour, the research by Pratt et al. (2003) suggests that behaving morally may itself promote moral identity. In this sense, opportunities for prosocial behaviour may in fact promote more ethical behaviour and higher degrees of moral identity in its members. Nevertheless, further research will be needed to explore if the relationship between moral identity and moral behaviour is unidirectional or bidirectional.

Understanding the factors that moderate or mediate the relationship between moral identity and behaviour (Hardy et al., 2005) is also an important goal. In some cases, those with strong moral identities do not necessarily act consistently with them. Several theorists and researchers have espoused the important role of behavioural intention. This construct, of course, is prominent in the theory of reasoned action/planned behaviour (discussed in a later section), and argues that people must not only have an attitude, but also an intention to perform some action as the result of it. Many other factors can affect this, such as peer pressure keeping a student from stopping her friend from being bullied, or simply not having the skills to bring one's intentions to bear. Elucidating these factors could make a very important contribution.

The exact mechanisms by which moral identity and moral behaviour are fused will also be important to understand. For example, some research has taken a socio-cognitive perspective, arguing that schemas (cognitive structures that organize prior knowledge and incoming information) become activated as people function in their social environment and these schemas

may drive moral behaviour (Lapsley and Narveaz, 2004; cited in Hardy et al., 2005). For example, a person for whom moral constructs are chronically activated may be more likely to engage in prosocial behaviour, such as holding the door for others. As such, these moral schemas may 'pull' for more moral behaviour.

Another interesting research area noted in the literature is the relation between moral identity and more automatic or unconscious behaviour (Hardy et al., 2005). Moral identity, in some ways, can be seen as a deliberate choice. For example, if one is able to identify what is right, then one chooses to integrate this into one's daily life. One might expect that, over time, continually making moral choices may enable one to become increasingly adept at making moral choices with very little conscious attention. Moral action, therefore, ceases to be conscious deliberation and becomes more "automatic" behaviour. To this point, however, there is no available research exploring "automatic" moral decision-making, so the processes by which a cultivated moral identity will actually become a part of one's being without conscious effort is unclear. This area of research would be an important one for further research and development, especially in CF operations where moral action will be highly time sensitive. It is certainly a worthy goal to select or to develop individuals who behave morally even without conscious deliberation.

Social identity. Exploring the power of social roles and social identity in forming and guiding self-identity is also critical for understanding moral motivation and behaviour. For future research, it will be important to look at how commitment to a particular role (e.g., commanding officer) or social identity (e.g., member of the CF) impacts MEDM and consequent behaviour. Many social roles come with clear prescriptions and expectations for conduct. When people adopt a new role, they are expected to conduct themselves in accordance with this defined role. Becoming a United Nations Peacekeeper, for example, introduces expectations for neutrality, diplomacy, and emphasis on "supporting a peace process and protecting potential victims of violence" (Tripodi, 2006). Unlike warfighting, the main features of peacekeeping include no formally identified enemy or adversary, no traditional victory, an emphasis on de-escalation, and a chain of command that is often made up of numerous players from different militaries (Tripodi, 2006). The ability to adopt or embrace this peacekeeping role may depend on the congruence between it and their previous self-definition and more familiar identity, i.e., combat soldier. However, despite the fact that military leaders recognize that peacekeeping and warfighting are very different activities (Tripodi, 2006), some military personnel seem to struggle to create congruence between their peacekeeper vs. war-fighter identities. Indeed, a recent field study showed that some CF personnel trained to be warriors may have had some difficulty in making the transition from the role of warrior to the role of diplomat (Thomson et al., 2007). Britt suggests that "the prescriptions associated with the identity images of '*peacekeeper*' and '*warrior*' are themselves conflicting", and despite having "become skilled in the techniques of peacekeeping operations, they still may not adopt the role of the peacekeeper into their view of what it means to be a soldier" (1998; cited in Tripodi, 2006). As CF personnel participate in a number of different types of missions, they will need to acquire the proper attitudes, values, and beliefs consistent with the various roles they assume and internalize these into the most harmonious composite identity possible.

Moreover, as self-discrepancy theory argues (Higgins, 1987) individuals may be influenced by the expectations of relevant others in performing their duties or by who they believe they "ought" to be. As noted earlier, Blasi's account of moral functioning is based on self-consistency, i.e., on the need to maintain coherence within the self. In this sense, research that highlights the interplay between self-identity and social identity is relevant. According to Higgins (1987, p. 320-321), the self can be broken down into three domains, which he describes as: "(a) the *actual* self, which is your representation of the attributes that someone (yourself or another) believes you actually

possess; (b) the *ideal* self, which is your representation of the attributes that someone (yourself or another) would like you, ideally, to possess (i.e., a representation of someone's hopes, aspirations, or wishes for you); and c) the *ought* self, which is your representation of the attributes that someone (yourself or another) believes you should or ought possess (i.e., a representation of someone's sense of your duty, obligations, or responsibilities)." Further, there are, what Higgins refers to as, two "standpoints on the self", which include our own and that of some significant other (such as a family member or close friend). When combined, there are six self-state representations. The actual/own and actual/other represent self-concepts, and the ideal/own, ideal/other, ought/own, and ought/other represent self-guides (Higgins, 1987). According to self-discrepancy theory, people are motivated to reach a state whereby their self-concept matches their relevant self-guides, and discrepancy between self-concept and self-guides is argued to induce varying levels of emotional discomfort.

Self-reports by CF personnel showed how self-discrepancies induced varying degrees of emotional discomfort as they tried to maintain a coherent moral identity in the face of challenging moral dilemmas (Thomson et al., 2007). These discrepancies emerged from both standpoints on the self, viz., personal evaluations and the evaluations of significant others. Having no choice but to make decisions that would harm some people (while saving others), they seemed to struggle with integrating the less than ideal person they had been forced to be with the person they wanted to be or the role they wanted to enact (actual/own versus ideal/own). They also faced the additional struggle of having strong normative pressure to "do the right thing", to uphold the values endorsed by Canadian society or the United Nations, when in fact they were unable to achieve this (actual/own versus ought/other). Consistent with the self-discrepancy theory, participants reported a level of emotional discomfort stemming from disappointment and dissatisfaction as well as shame and guilt with their inability to fulfil their mandates because of the situations in which they were placed. In recounting his experiences as a commander in Croatia, for example, Major-General A.R. Forand (1996) argues that an individual's conscience is a very necessary part of the ethical decision-making process. He states,

> *"I believe that once a soldier's conscience is aroused, it defines a line he dares not cross and deeds he does not commit, regardless of orders, because those very deeds would destroy something in him which he values more than life itself. However, the possibility of a clash between conscience and duty, through ignorance and misjudgement, is still very real."* (1996, p. 31)

What stands at risk of being destroyed in some difficult moral and ethical decisions is one's very sense of self. The detachment from one's self, and the reluctance or inability to incorporate one's decision into a new sense of self, seems likely to be a critical source of psychological tension. In short, how individuals construe their role and the expectations arising from it at any given time has potentially critical implications for how they will conduct themselves when confronted with moral and ethical dilemmas.

Moreover, as CF members shape their identities around the 3-D (defence, diplomacy, development) concept of operations, they will take on multiple roles, which all require specific behaviours. The multiplicity of roles may impact MEDM, especially in cases where these roles may demand incompatible expectations for behaviour. For example, in the case of Lt Trevor Greene serving in Afghanistan in 2006, demands for diplomacy seemed somewhat at odds with the demands of combat. Respecting the decrees of a *shura* (i.e., consultation among key representatives of a community to share in decision making), by removing his helmet, and upholding the need to build positive relationships with village elders, Lt Trevor Greene left himself vulnerable. Unsuspecting,

he suffered a blow to the head by an axe wielding “enemy combatant”. But again, CF ethos and identity outlines clear expectations as to how one ought to behave in certain operational circumstances, such as a *shura*, but perhaps finding the ideal balance between these demands remains a challenge.

As a whole, then, this section suggests that identity (both self and social) is a fundamental component of MEDM. Understanding whether promoting positive and articulated self-identities will help to strengthen the link between moral knowledge and moral action should be a critical focus of this program.

Table 6: Person-based factors

Main Question	Research Questions
What attitudes and values influence MEDM?	How do attitudes and values influence MEDM? Is moral conviction an attitude or something different? Under what conditions do moral mandates help or hinder MEDM? What factors predict whether a person will act in accordance with their held values and attitudes?
What individual differences impact MEDM?	How does moral development influence MEDM? How does it shape our moral behaviour? How does it change over time? How does an individual's risk perception impact on their moral and ethical decisions and actions? How do individual differences in managing stressful situations vary the process of MEDM? How does an individual's need for closure impact MEDM?
What is the relationship between self-identity and MEDM?	How does self-identity impact MEDM? What facilitates the transfer of moral knowledge into self-identity that guides moral behaviour? What underlies an individual's moral conscience? How does moral conscience influence the construal of the moral issue? How does it impact moral motivation? How do individuals internalize moral values and principles? How does acting in a way consistent with these values and principles actually lead to greater internalization? What current socialization processes in CF training help to promote a moral identity? For example, how do social processes (e.g., regimental culture) exert influence on self-identity and MEDM? How do moral exemplars influence moral judgement and behaviour? What are the categories associated with moral exemplars? How do moral exemplars shape moral development? Do comparisons with moral exemplars foster or hinder moral motivation and moral behaviour? What is the nature of the causal link between moral identity and moral behaviour? Is it unidirectional or bidirectional? Is it possible to reduce self discrepancy by helping people to separate their actions from situational demands (e.g., when they are placed in situations where they have to make impossible decisions)? Can promulgation of a social role help with this? How can strong moral identity/identity integration be promoted? How does identification with Canadian values influence MEDM in a military context?

2.2 Team Characteristics[1]

MEDM has most often been defined as an individual effort. However, within a team context, the process necessarily involves substantial interaction with (and influence from) other team members. As the CF is quickly moving toward a more distributed, agile force, there is increased emphasis on collaborative teamwork and on the ability of diverse teams to make good decisions, including good moral and ethical decisions. Several team factors are likely to influence this, which include, but are not limited to, team size, structure, history, physical distribution, and diversity (Figure 2). Each of these factors is discussed in further detail in the following section.

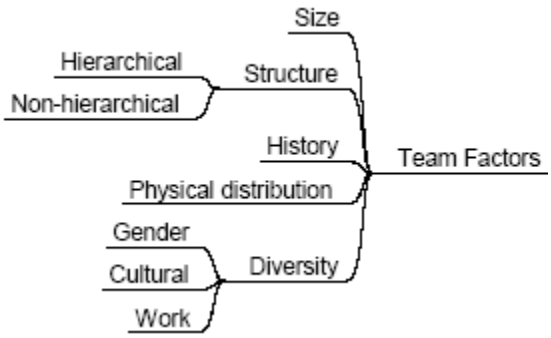

Figure 2: Team characteristics

Size. Team size can vary widely from large teams (e.g., a section has 8 members) to small teams (e.g., a United Nations Military Observer field team typically has 2 members). Team size has the potential to influence MEDM in several ways. First, size may affect MEDM through its impact on team processes. For example, although larger teams can generate more outputs because they consist of more resources and skill, they can also increase team processing demands (e.g., as teams grow in size, communication becomes more difficult). Larger teams have been shown to have larger coordination needs (Bass, 1982; cited in Morgan and Bowers, 1995), which may detract from the task at hand. Given that one of the purported benefits of teams is broader expertise and creativity due to a wider range of perspectives (e.g., Horwitz, 2005), increased size may provide more diverse inputs regarding a moral and ethical decision. However, research suggests that larger teams require more conformity among group members (Gerard, Wilhelmly, and Conolley, 1968; cited in Morgan and Lassiter, 1992).Conformity, social loafing, and the diffusion of responsibility may become problematic, and this could work to suppress the best possible resolution of moral and ethical decisions. Consequently, small teams may be better able to deal with the complexities of identifying all the different aspects of a moral and ethical decision, because of more opportunity for all team members to participate. The general consensus is that smaller teams are more productive because they facilitate communication, cohesion, and coordination (Horwitz, 2005). But this is largely dependent on the task. For example, it has been suggested that teams of no more than six members are more appropriate for intellectual tasks, such as decision making (Horwitz, 2005). Unfortunately, there is no available empirical literature that speaks directly to MEDM in teams and the further impact of team size.

[1] This section does not address team functioning during the process of making moral and ethical decisions. Please see the collaborative decision-making section.

Structure. Similarly, a team's structure has the potential to influence MEDM. Structure is often conceptualized as comprising lines of authority. In its simplest form, a team can be structured hierarchically or non-hierarchically. Hierarchical teams have different layers of authority, such that each layer reports to the layer above (this, of course, is a common military structure). In contrast, in non-hierarchical teams the authority is spread across team members. Differences in authority structure clearly have the potential to influence team MEDM as differences in power may give more weight to one person versus another. This might be problematic for subordinates who see a moral issue but do not feel empowered or entitled to act. Moreover, changes in team structure also have the potential to influence key team processes, such as communication and coordination.

History. Other team factors such as a team's history can also have ramifications for MEDM. Research has shown that teams who have worked together in the past or who have trained together perform better than teams that are created ad hoc (e.g., Adelman, Bresnick, Christian, and Gualtieri, 1997). Teams with longer histories may be more aware of each other's strengths and weaknesses, may share goals and expectations, and may have common views of how ethical dilemmas should be resolved. However, team history may act as an impediment. For example, strong group cohesion and loyalty may generate groupthink or group polarization. On the other hand, team history may make it easier for members to dissent on particular ethical issues, thereby opening up discussion around critical moral and ethical judgements and decisions.

Physical distribution. With the advancement of technology, team members of today are more likely than ever to participate in distributed rather than face-to-face teams (Colquitt, Hollenbeck, Ilgen, LePine, and Sheppard, 2002). Geographically distributed teams consist of individuals in different locations who share accountability and hence are required to work together to accomplish the team's goals (Mohrman, 1999). There is good evidence that the physical distribution of team members may result in communication difficulties because it eliminates useful implicit and explicit cues, such as tone of voice and facial expressions (Driskell, Radtke, and Salas, 2003), often resulting in what has been termed "team opacity" (Lenné, 2003). The impact of physical distribution, it would seem, is likely to be even more pronounced for teams having to make difficult ethical decisions, especially in cases where some team members are in the situation and others are outside of the situation.

2.2.1 Proposed area of focus – Team diversity

For the CF of the future, a critical influence on MEDM will be team diversity. The most common forms of diversity are gender, cultural and work related (e.g., background and training).Cultural diversity, for example, is likely to be particularly critical in the future given the multinational nature of military war-fighting and peacekeeping operations. The current coalition force in Afghanistan is one example of a CF mission that includes militaries from multiple nations. United Nations military observer teams more often than not include members of different cultural backgrounds (e.g., North American, Asian, and African). Within diverse teams, individuals are likely to have competing values and beliefs as well as different standards for their own attitudes and behaviour within the mission area. How these cultural differences play out in team MEDM, such as a decision to provide food or assistance, is of critical interest to the CF for the future.

To date, however, research on the impact of cultural diversity (race and ethnicity) within teams has shown inconsistent and inconclusive results (Horwitz, 2005). Due to differences in backgrounds and experience, ethnically diverse teams may have varied perspectives, which could enhance team processes like decision-making. In theory, when innovation or creativity is required, one would expect diverse teams to perform better (Horwitz, 2005). Some research suggests that heterogeneous

teams outperform homogenous teams on some task performances, such as problem perspectives and the range of possible solutions (Watson, Kumar, Michaelsen, 1993; cited in Knouse, Smith, and Knouse, 1996). However, there is some reported evidence that diversity can also hinder team processes. For example, research suggests diverse teams may take longer to solve problems, may communicate less effectively (Knouse et al., 1996), may be less likely to create shared mental models (Knouse, Smith, and Knouse, 2001), and may enter into conflict more often than homogenous teams (Bowers, Pharmer, and Salas, 2000). Diverse teams have also been argued to show less cohesiveness because of differing backgrounds and have less interpersonal similarity and fewer common experiences to rely on to promote mutual attraction and the motivation to work together (Knouse et al., 1996). Moreover, teams with more diverse racial composition have shown to have more conflict than racially homogenous groups (Sessa, 1993; cited in Horwitz, 2005).

There is also good evidence in the literature that culturally diverse teams may behave differently on judgement and decision-making tasks. Weber and Hsee (2000) reviewed past research regarding the impact of national culture on judgement and decision-making. Briefly, they found Asians were more extreme and less accurate than British participants when making probability judgements. Moreover, compared to Westerners, Easterners have higher overconfidence in the accuracy of their answers to general knowledge questions. These differences are attributed to variance in quantitative sophistication, social orientation, and educational traditions. Other research has found that cultural differences in risk perception can be attributed to the fact that, in general, cultures selectively attend to some dangers, while ignoring others, and have different levels of trust in institutions. Other research reviewed showed that Chinese are less risk-averse in financial decisions compared to Americans, perhaps because they have more social networks to insure against catastrophic risk outcomes (Weber et al., 2000). Other cultural differences in decision-making may be attributed to different cognitive styles, motivation, and what a given culture values. People raised in Western cultures may favour “pure” rational decision-making, whereas Eastern cultures tend to rely more on the traditions of their ancestors to guide their decision-making. Similarly, people from Western cultures tend to think and act as individuals, whereas people from Eastern cultures tend to think and act more interdependently (Markus and Kitiyama, 1991).

The impact of team diversity within a given team, however, will also be influenced by many other factors. Team history, for example, may buffer the impact of diversity. A longitudinal study of diverse teams found that heterogeneous teams outperformed homogenous teams on some aspects of task performance, such as problem perspectives and the range of possible solutions (Watson, Kumar, Michaelsen, 1993; cited in Knouse et al., 1996), but only after the first 17 weeks of being together. This suggests that even diverse teams can learn to work together if provided enough time. There is also evidence that task difficulty and/or complexity can affect the relationship between diversity and team performance (Horwitz, 2005). Complex tasks may require team members to pool their resources and formulate strategies more effectively than do simple tasks. Teams with more diverse backgrounds may have a wider range of perspectives, and may perform more effectively when confronted with complex tasks. However, according to Horwitz (2005), in dealing with simple, routine tasks, team diversity can be unnecessary and counterproductive. Unfortunately, no available empirical research has addressed team MEDM, so it is impossible to know with certainty whether team diversity might help or hinder it.

Weber and Hsee (2000) conclude that the impact of culture (e.g., national culture) on judgment and decision-making has received inadequate attention from researchers. They (2000) have emphasized the need for more research into connection between culture and decision-making, as strong conclusions should not be drawn from existing research. Weber and Hsee (2000) also stressed the importance of model-based research driven by strong guiding theory about cultural and

psychological processes and emphasized the need to create experiments that test causal attributions as well as combining multiple research methods to investigate cultural differences. Such a program of research, they argued, should also distinguish between overt cross-cultural behavioural differences and the underlying cultural factors driving these differences. Although focusing on decision-making as a whole, it seems likely that the limitations noted in Weber and Hsee's (2000) review, are equally applicable to MEDM specifically.

At a very broad glance, the literature does not provide any conclusive answer about the relationship between team diversity and team ethical decision-making processes and outcomes. Understanding the impact of team cultural diversity on MEDM will be an important area to investigate as the research program moves forward, especially as the CF itself becomes increasingly more diverse. It will be important for the CF to leverage this increasing diversity among its ranks. The research program for MEDM has an opportunity to provide meaningful data to compliment this objective.

Table 7. Team factors

Main Question	Research Questions
How does team size influence MEDM?	Do teams of varying sizes use similar processes for MEDM? Is there an optimal process? Are smaller teams more or less capable of effective MEDM?
How does team structure influence MEDM?	Does team structure prevent some individuals from participating in MEDM? Do hierarchical teams undertake the same MEDM processes as nor-hierarchical teams?
How does team history affect MEDM?	To what extent does team history influence MEDM abilities of the team? Are experienced teams more or less likely to be able to reach consensus on moral and ethical issues? Are teams with a shared history more susceptible to groupthink or group polarization than teams with little shared history?
How does physical distribution affect MEDM?	Do factors in face-to-face communication (facial expression, body language) facilitate group MEDM? Vice versa, does the lack of such factors impair MEDM? Is the process of MEDM different for teams who are collocated vs. teams who are distributed in time and space? Does physical distribution of teams provide more time for team members to reflect on the moral issue?
How does team diversity influence MEDM?	How does team diversity impact MEDM? Does diversity make teams more or less adept at MEDM and under what conditions? Do teams consisting of diverse cultural backgrounds approach MEDM in a different way than culturally homogeneous teams? How do culturally heterogeneous teams behave when moral and ethical dilemmas test differing cultural values (e.g., treatment of women)? How can heterogeneous teams best be supported to make optimal moral and ethical decisions?

2.3 Contextual Factors

Unlike situational factors, which are more temporal and immediate, contextual factors are much more constant and fixed. For example, mission type, a contextual factor, will for the most part remain constant, whereas situations within that context will vary according to a number of factors, such as risk, uncertainty, time pressure, moral intensity, and available choice alternatives. Many different contextual factors are likely to influence the process of MEDM. These include organization culture, national culture, and specific factors related to the type of mission and the rules of engagement (ROEs) in play (Figure 3).

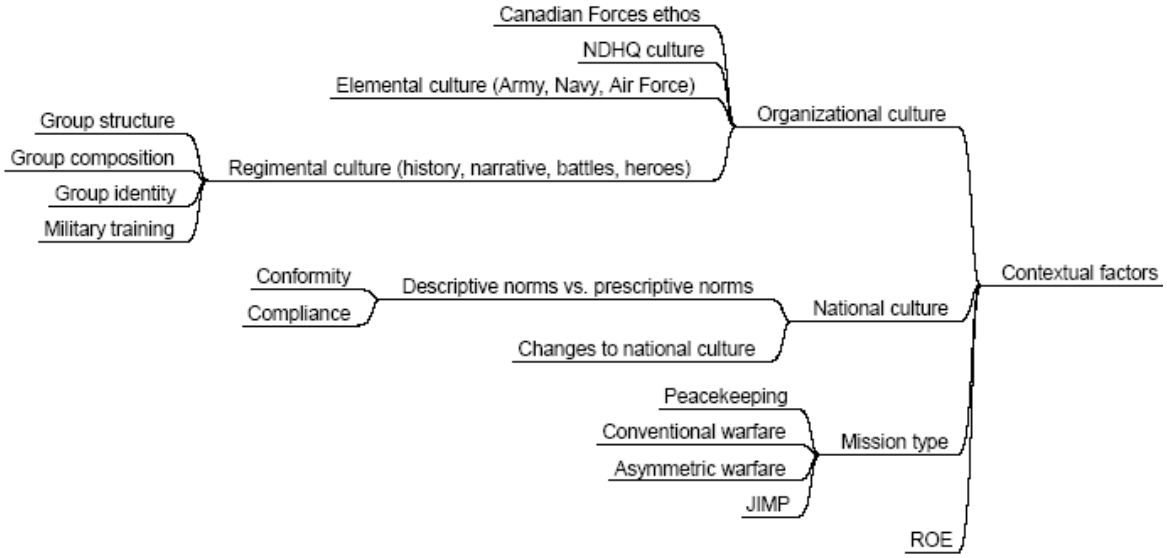

Figure 3: Contextual factors

Organizational culture. Organizational culture clearly has a critical impact on MEDM. As a normative institution, the CF exerts tremendous influence on its members to promote its espoused values, beliefs, and codes of conduct. Rules and regulations are foundational, and obedience to orders is expected. Ideally, commitment to the military means emulating its values and abiding by its codes and conduct, rules and regulations. Its very functioning hinges on coordinated efforts toward shared purposes. Hence, responsibility is transferred up the chain of command, which creates a unique context for empowerment and accountability. It is important, therefore, to consider the organizational culture as the backdrop to MEDM in an operational context.

As in-person interviews indicated, when making ethical decisions, the ideal situation is that there is some overlap between CF personnel's own individual value system and the military's value system (Thomson et al., 2006a). It is important, therefore, to understand how individuals internalize organizational values into their self-identity so that ethical conduct becomes more likely. Moreover, interviews revealed that organizational culture, regimental culture and Army ethos can actually be quite distinct but that they can all impact on MEDM and behaviour (Thomson et al., 2006a). Understanding regimental culture (i.e., "Vandoos", "Dragoons", etc.), with its history, role models, and legends may help to elucidate the socialization processes that generate beliefs, values, expectations and norms for ethical decision-making and behaviour. It is important, therefore, to understand how the positive aspects of regimental culture could be used to help foster and promote moral character and conduct among CF personnel.

National culture. Moreover, deploying to countries outside of Canada also presents a challenge, especially when cultures and social norms and values are divergent from those espoused in Canada. Research suggests that deployed CF members will sometimes face pressure to adopt standard of behaviours that are antithetical to Canadian values (Thomson et al., 2006a). For example, one CF member recounted,

> "*it is common in the third world* [that] *the security force pick up switches and will whack people into line to maintain control at the feeding station… you'll see local police pick up a switch and even UN peacekeepers from other nations to pick up a switch to maintain*

order and discipline… I couldn't do that as a Canadian – I couldn't pick up a switch and start lashing some woman who is trying to get food for someone." (Thomson et al., 2006a, p. 91)

As such, many moral and ethical decisions will be made in these contexts. A research program that considers culture and varying social norms and values as critical influences on MEDM will be critical.

Many moral decisions will be made in national contexts where prior upheaval has led to great change. As a result, mission contexts may involve the transformation of one set of values for another in a host country, and CF personnel will be a part of this. For example, the current armed conflict in Afghanistan has seen the transition from a pro-Moscow communist party to an extreme theocratic state to a burgeoning secular democratic government. These transitions are all linked with unique values and standards that shape the national zeitgeist. Thus, the impact of national culture on MEDM cannot be overlooked. Any systematic research program should address the influence of the national context in which these kinds of decisions will be made.

Mission type and rules of engagement (ROE). Aspects of the mission are also important to MEDM. It is critical to note, however, that much of the theorizing in military ethics (e.g., Walzer, 1977) focuses on how the soldier should behave in combat situations. This does not readily translate into operations other than war (OOTW). For example, soldiers on peacekeeping missions may be expected to confront more complex moral and ethical decisions than soldiers engaged in conventional warfighting theatres (McFarland, 1999; Thomson et al., 2006a; Tripodi, 2006). Canada deploys often as a contingent in a UN mission throughout the world. The type of mission, for example, peacekeeping or combat, will have its own specific mandate and rules of engagement (ROE). For example, past research showed that limited ROEs sometimes led to significant moral dilemmas in this regard (Thomson et al., 2006a). One soldier described the particular moral dilemma he faced in operations, and how he managed to resolve the dilemma and maintain his self-identity as a soldier/peacekeeper.

"The area where we served included a group of minorities. Our ROE allowed us to use up to deadly force to protect our own troops or allied troops, meaning UN troops. We would see irregulars with automatic weapons, under the influence of alcohol, going into the village, and we knew something could go very bad. We had not anecdotal, but real evidence that the previous contingent from another nation had not done anything and there had been killings. But we did not have the authority to use lethal force. We could not engage them, or if they started shooting the civilians we could not legally, formally do anything.

"So, we thought about matters for a long time. My operations officers, the company commanders, and I looked at it and said: 'There's no way we can just let this go.' So there were the orders, i.e., we can't just start a fire fight with them, because it's a no go. But because my UN orders were so general and incomplete, what we did was we more or less interposed ourselves in between them [the civilians] *and the belligerents. We asked, 'Does anything preclude us from doing aggressive patrolling of the village? No nothing does. Okay, so we'll go there and hopefully by our presence will intimidate these thugs.' This is what happened. We intimated them. So if the belligerents fired, they were firing upon us and it would become self-defence and I could use force up to and including deadly force."* (Thomson et al., 2006a, p. 15)

Today, UN peacekeepers have more robust ROEs, i.e., they are authorized to use force to protect innocent civilians from harm. This is a relatively new policy in response to the events that occurred in the 1990s peacekeeping missions in the former Yugoslavia and Rwanda. However, as Blocq (2006) points out, traditional guidelines do not assist moral and ethical decision-making when it comes to engaging combatants or belligerents to protect civilians in this kind of mission. Indeed, how and when soldiers make a decision to engage will be an extremely difficult ethical decision given the potential ramifications, such as the potential political fallout, the perception of the blue beret as a neutral entity, and general force protection (Blocq, 2006). Helping soldiers make MEDM in a variety of mission types that include different ROEs, therefore, is an important factor to consider when trying to understand the complexity of MEDM in operations.

Table 8. Contextual factors

Main Question	Research Questions
What is the CF organizational culture and how does it relate to MEDM?	Are there differences between the CF's stated ethos and member's perception of organizational culture? How closely related are personal values and principles to organizational values and principles, and when and how does one's self-identity merge with group identity? How do organizational values and obligations determine MEDM? Do CF personnel share the same positions on moral issues? How closely will the justifications for actions be? How do organizational culture and regimental culture differ? How does regimental culture determine MEDM? Compared to other regiments, do CF members' regimental cultures that emphasize unique character traits behave differently under moral and ethical dilemmas?
How does national culture influence MEDM?	What aspects of national values are important to MEDM? Are these consistent across nations? Can MEDM processes be predicted on the basis of national culture?
How does the mission type impact MEDM?	How does the kind of mission influence MEDM? How do ROE impact MEDM? What sorts of ROE enable soldiers to deal with MEDM situations?

2.4 Situational Factors

Many different situational factors have the potential to influence MEDM. Again, unlike contextual factors, which are more fixed and lasting, situational factors are grounded in a particular time and place and are therefore more temporal and variable. A program of research investigating MEDM will find these variables or conditions relatively easy to manipulate, and may discover that these demand very different social cognitive processes for resolving moral conflict or quandaries. Situational factors include moral intensity, time pressure, uncertainty, risk, and available choice alternatives (Figure 4). In many cases, these will be interconnected.

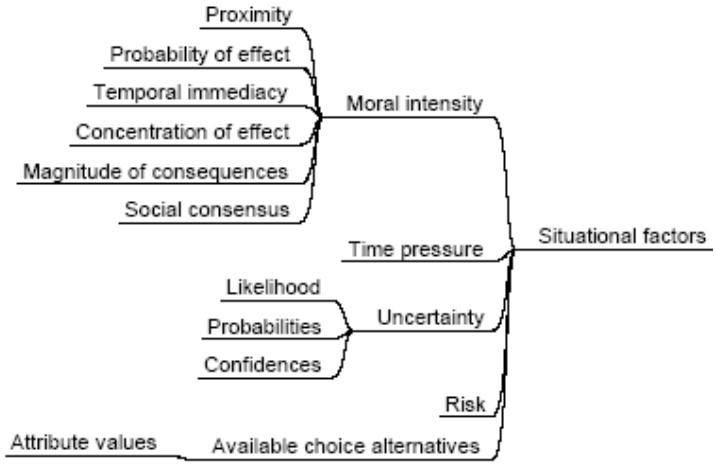

Figure 4. Situational factors

Moral intensity. A central precept of Thomas Jones' (1991) Issue-Contingent Model of Ethical Decision-making in Organizations, moral intensity refers to the salience and vividness of six characteristics of a moral situation: magnitude of consequences; social consensus; probability of effect; temporal immediacy; proximity; and concentration of effect, casting each of these characteristics of the moral issue as independent variables. Our interview study of CF commanders revealed that moral intensity effects were prominent in their descriptions of ethical dilemmas they had encountered in their careers (Thomson et al., 2006a). Moreover, research we have conducted showed that increases in moral intensity, i.e., proximity to one of the victims during a human rights violation scenario, increased soldier trainees' level of risk-taking behaviour (Thomson et al., 2007), with trainees increasing the risk to their own safety by following local police and civilians into unfamiliar terrain after coming face to face with the female victim, thereby. It might, therefore, be worth investigating if and how an ethical construct like moral intensity fosters higher risk-taking behaviour and, more significantly, why this occurs, and in general, how it affects the moral and ethical decision making process. What ethical processes encourage individuals to take greater risks than they would otherwise? Is it a heightened degree of empathy arising from increases in moral intensity that compel individuals in this direction or is it a heightened degree of personal responsibility? Moral intensity could be varied to discover whether characteristics of the moral issue, such as proximity, probability of effect, temporal immediacy, have an impact specifically on moral motivation and action and why.

It is also important to discover if moral intensity sheds light on why individuals say one thing and yet do another. Moral intensity could be studied in more immersive research approaches, where moral and ethical decisions have to be made, consequent behaviours have to fulfilled, and tasks have to be completed. Moral intensity should also be linked with Bandura's social cognitive approach to moral decisions and actions to understand just how moral actions become moral behaviours.

Time pressure. How CF personnel resolve moral and ethical dilemmas will undoubtedly be influenced by the amount of time they have available when making a moral and ethical decision. Time pressure generates numerous questions for MEDM. For example, under time constraints, will participants share less information as they try to resolve a moral dilemma, and if so what are the ramifications for this? Kerr and Tindale (2004) document a number of research findings that show how time pressure impacts on whether available information is shared in group decision-making. For

example, when time for group discussion is extended, members introduce more unshared information (Larson, J.R., Foster-Fishman, P.G., and Keys, C.B., 1994, cited in Kerr and Tindale, 2004). Another question with respect to MEDM and time pressure is what processes will participants rely on when they have less time to make a moral decision? Will they be guided more by their moral emotions than they would be if they were not under time pressure? How will their reason, intuition or input from others impact this process in this type of situation, and how is this reliance shaped by individual differences and the unique roles people have (e.g., CWO vs. Lt)? Time pressure then will be an important as well as easy variable to manipulate in research initiatives investigating MEDM.

Uncertainty. Uncertainty involves being unable to predict the future or not knowing the outcome of one's choices and action. Uncertainty can also refer to the inability to determine acts of omission vs. acts of commission. For example, belligerents and combatants in today's conflicts are not easily identified because they are not demarcated by a particular uniform and they blend into the civilian population. A soldier manning a check point or OP may have difficulty determining when he has an obligation to engage. Soldiers will likely want a definitive solution to moral and ethical dilemmas that they confront in operations. In support of this, Kerr and Tindale (2004) note that when performing under highly stressful situations, a team's need for structure (i.e., a need for a definitive, non-ambiguous answer) increases, which has implications for information dissemination and utilization. In situations which are highly uncertain, this need for structure may be an effective heuristic for resolving tough moral and ethical dilemmas. Of course, it could also be an ineffective means. With respect to moral dilemmas, this remains an empirical question worthy of further investigation.

Risk. Risk can be defined as the possibility of loss or injury (Merriam-Webster, 1983). Our research showed within a military operation, the level of risk inherent within a situation is likely to influence how moral and ethical situations are interpreted and resolved (Thomson et al., 2006a). For example, one participant described the conditions on the CF's base in operations as high risk because of infiltrators with "blades". Risk influenced his decision to permit his soldiers to use "minimal force" with those caught and detained to let them know that the Canadian soldiers were in charge. The participant viewed this as ethically justifiable given the level of risk to his soldiers within the situation. Careful examination of moral decisions under risk may reveal very different perspectives of what is right.

Available choice alternatives. Of course, the alternatives available to individuals in ethical dilemmas have the potential to influence their decision-making processes. By its very nature, a dilemma is typically a choice between two conflicting options. Although the situation often dictates how many actual choice alternatives are available when resolving moral and ethical dilemmas, perceived choice alternatives are also shaped by the decision maker's construal of the situation. Research showed that in some cases, soldiers had singular choice alternatives, whereas others had multiple choice alternatives (Thomson et al., 2006a). These required very different MEDM processes to emerge.

The most difficult moral dilemmas soldiers confront are those situations in which the choice alternatives are both bad. In-person interviews with officers deployed in some of the worst conflicts in the 1990s revealed how they sometimes had to choose between the lesser of two evils (Thomson et al., 2006a). Having the choice between a violent death at the hands of the militia or death from cholera within the confines of the UN Protected Area (UNPA), one participant recounted, "within 24 hours, 36 hours a family died of cholera because I took them to a place that was a hell hole - but I had no other place to take them" (Thomson et al., 2006a).

Available choice alternatives will have a huge impact on MEDM, which can be constrained by the situation as well as by individual differences, such as problem solving and experience. Moreover,

reflecting on moral dilemmas in operations, we found that available choice alternatives helped participants come to terms with the difficult “lesser of two evil” decisions they were forced to make (Thomson et al., 2006a). This allowed participants to spread the responsibility outside of the self to other external forces that were beyond their control.

Table 9. Situational Factors

Main Question	Research Questions
How does moral intensity influence MEDM?	How does the proximity to the moral issue alter a soldier's perception and judgement of that issue? How does the probability of effect shape a soldier's moral motivation and action? How does the probability of effect impact a soldier's interpretation of the decision after the fact? How does the temporal variation of onset of consequences shape the process of MEDM? Does temporal immediacy lead to moral action? How does the magnitude of consequences shape soldier's perception and judgement of moral issues? Does the magnitude of consequences desensitize a soldier's moral perception in any way?
How does time pressure impact the process of MEDM?	How does time pressure interact with MEDM? How does time pressure shape the process of MEDM? Are individuals more likely to use heuristics or intuitions rather than rational MEDM in the face of time constraints? Does this lead to positive or negative outcomes? When in a team, does time pressure impact MEDM differently?
How does the uncertainty of the MEDM situation affect judgment?	Do moral intuitions arise in situations of uncertainty? What kinds of moral heuristics are fostered in uncertainty dilemmas? How does an individual's high need for closure impact MEDM in situations that have a great deal of ethical uncertainty?
How does the perception of risk impact MEDM?	How does risk shape the process of MEDM? Does risk change our MEDM in a way that runs counter to our values and principles in non-risky situations? How do CF members change their MEDM processes in the face of high risk situations? Are they less likely to adopt certain strategies (e.g., confrontational negotiation tactics in human rights abuse scenarios) when confronting high risk situations? How do we understand courage in high risk situations, such as witnessing a human rights violation? Should some instances of courage be understood as rash, leading to greater risk taking?
How do available choice alternatives impact MEDM?	How does the perception of available choice alternatives influence the interpretation of the decision after the fact? How do alternative choice alternatives impact personal responsibility?

2.5 Judgement/Decision-making

As can be seen in Figure 5, a number of processes are involved in making moral and ethical judgements and decisions. These include rational processing, intuitive processing, framing of the moral situation, and the potentially influential role of collaborative processing.

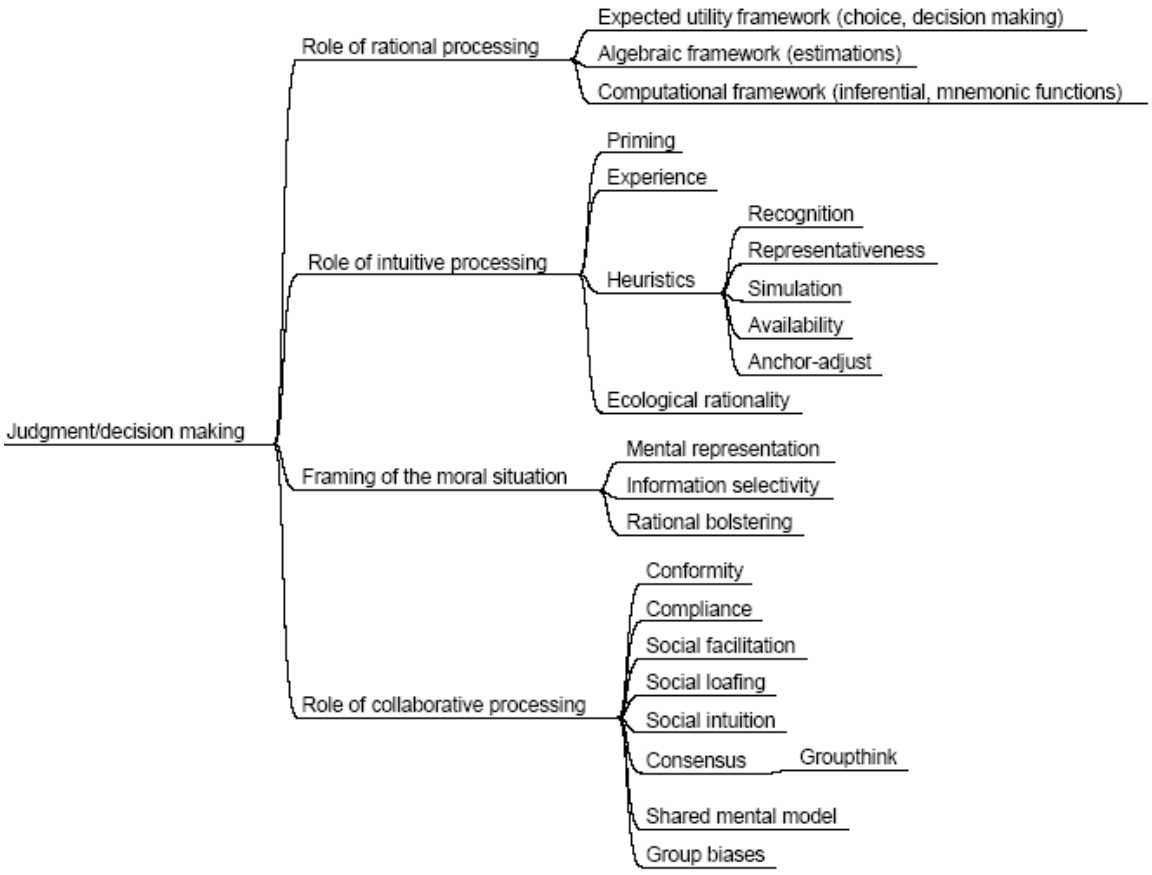

Figure 5. Judgment/decision-making

Role of rational processing. Rational decision-making models include expected utility, algebraic and computational frameworks. These models are typically linear and prescriptive in nature with a high degree of complexity. More recently, however, compelling theories and models of decision-making have challenged the belief that decision-making is (or ought to be) a purely rational, cognitive process. By extension then, these purely cognitive models fail to fully account for the various processes and biases involved in making moral and ethical decisions (e.g., Jones, 1991; see also Haidt, 2001).

Role of intuitive processing. For instance, a strictly rational model of MEDM does not sufficiently account for factors such as intuition and emotion. In our interview study many of our CF senior and general officers who served as respondents described how their moral and ethical dilemmas were sometimes resolved with a combination of rational and intuitive processes (Thomson et al., 2006a). Proponents of naturalistic decision-making argue that decision makers actually make decisions more from intuition and experience than from a calculated methodical process where *all* of the relevant information is assessed and considered before moving to *the* optimum choice.

Experts seem able to find mental "short-cuts", i.e., heuristics, instead of having to go through time consuming deliberations. Research in military settings has lent support to the Recognition-Primed Decision (RPD) model finding that decision makers often engage in non-comparative deliberations before making a decision (Kaempf, Klein, Thordsen and Wolf, 1996; cited in Pliske and Klein,

2003), and not to the peril of the decision outcome. In fact, decision makers base their decisions on analogous situations and then choose a course of action that is comparable to the current situation (Killion, 2000).

A theoretical paper by Cass Sunstein (2005) explains that people invoke moral heuristics when making moral judgements. He provides a number of domains in which these emerge, such as risk management, punishment, reproduction and sexuality, etc. He continues that these moral heuristics often lead to "significant mistakes" because they are sometimes taken out of context; they are sometimes used as universal truths; or they are sometimes used when justification fails (Sunstein, 2005). However, Anderson (2005; cited in Sunstein, 2005) argues that moral heuristics are only problematic when used as absolute conclusions rather than conditionally given. As such, they assist moral reflection when the deliberative context is simply not up to the task (Anderson, 2005; cited in Sunstein, 2005). What puts a limit on moral heuristics, Anderson continues, are the social contexts in which moral deliberation arises and not the heuristic *per se*. Instead, the context prevents the adequate integration of further information. The example she uses to explain her point is a contemporary punishment case in which judges and jurors mete out punishment to guilty defendants on the basis of the wrongdoing, that is an "outrage heuristic", and not on the basis of considering the consequences on "innocent third parties" (e.g., the guilty defendant's spouse and children). The limited task of the courtroom, she argues, fixes the "outrage heuristic" as absolute and prevents other additional heuristics from entering into the deliberative process. Instead, broadening the context might make moral heuristics more fluid and more malleable to the current situation. So moral heuristics may lead to significant mistakes because the context in which they arise prevents additional information and other heuristics from entering into the deliberation. In this sense, moral heuristics are viewed simply as a cognitive liability.

It will be important to understand the role of moral heuristics in moral deliberations. This will broaden our understanding of how MEDM operates in a military context. And given that military operations often demand quick decisions and prevent conditions for extensive deliberation, there may be considerable benefit in working to establish intuitive MEDM models more firmly in a military context, which foster positive decision outcomes. Lengthy formal procedures and strict adherence to rules and regulations may not necessarily yield the best results for ethical decision makers, especially across a variety of operational situations. In situations with high risk, uncertainty and time pressure using normative models of decision-making to make the best moral decision might actually hinder the processes rather than aid it. It will be important to investigate the influence of these factors on rational and intuitive approaches for processing moral and ethical issues.

Framing of the moral situation. Moral and ethical judgement and decision-making will likely be impacted by how individuals frame the moral issue. Framing shapes the decision maker's preference for one option over another. For example, Kahneman and Tversky (1984; cited in Sunstein, 2005) showed that simple semantic changes to a moral scenario generated very different responses. They showed people favour outcomes described in terms of "lives saved" as opposed to "lives lost", even though the outcomes in terms of loss of life were the same in both scenarios. The formulation of the moral issue, therefore, may shape individuals' perception of the moral situation. For example, moral issues framed to highlight the loss of life, such as the toll to the civilian population in particular military operations, may elevate moral concern and awareness. Moreover, in-person interviews with senior officers demonstrated that depending on where one was located in relation to the moral issue, for example, back at NDHQ or in the field, the moral issue was framed differently (Thomson et al., 2006a). Framing effects might be influenced by the norms and habits

of the individual making the decision as well as their personal characteristics or where an individual resides in relation to the moral issue. Framing will undoubtedly impact MEDM.

2.5.1 Proposed area of focus – The role of collaborative processing

Traditionally, MEDM has been understood as a rational process undertaken by individuals through conscious thought processes. Recent research and theory, however, has increasingly challenged this assertion, and has argued that decision-making in general, and MEDM specifically, is not necessarily a rational, orderly process, but a multi-dimensional and sometimes meandering process that implicates moral intuition, shared reason, and culture. For example, Haidt's (2001) Social Intuitionist Model of Moral Judgement suggests that people typically make moral judgements intuitively and immediately by way of an unconscious set of interlinked moral concepts. As such, the social intuitionist model seeks to downplay the "private reasoning" of individuals in *actual* moral judgements and emphasizes the impact of social and cultural influences, such as group norms and beliefs.

Moreover, the social intuitionist model also argues that people only enact true reasoning processes retrospectively, when asked to provide justification for their moral evaluations. In this sense, Haidt (2001) argues that people are more like biased lawyers who argue for a specific perspective than like unbiased judges who summon all the relevant evidence and then make their decision (as rationalistic models would argue). Haidt does not deny the existence of private reflective reasoning or judgements determined by rules and principles. Rather, he argues, that in "real judgement situations", moral reasoning sometimes emerges from rhetorical battles with others. The social intuitionist model, then, argues that our reasoning about moral issues moves through a collaborative justification process, and individuals combine their reasoning capacities to either reinforce or diminish their initial moral intuitions. This collaborative process was evident in interviews with senior officers who recounted moral dilemmas in CF operations (Thomson et al., 2006a). These examples showed moral quandaries were articulated and resolved with and through discussions with trusted colleagues, friends, family and advisors. This compelling description of the "collaborative justification" of a moral issue argues that MEDM can be a group process. How individuals work together to define the nature of a moral and ethical issue, to explore the options, and to make and then enact their choices will be a critical aspect of understanding team MEDM.

Relevant research from other areas also argues that social and cognitive factors are likely to be relevant to team decision-making. For example, how teams work together to combine and weight information has a serious influence on the decision that they make and on its effectiveness. In order to arrive at a correct decision, researchers have consistently shown that groups need to pool information initially provided to individual members (Postmes, Spears and Cihangir, 2001). However, groups often show biased sampling and use of information. Instead of pooling information, group members rely more on shared information which is available to all of them, and this can bias their evaluation of possible solutions. Factors such as group norms can influence the selective use of information within the group setting. For example, groups who adopted a consensus norm (or those under "the influence of 'social sharedness'", see Kerr and Tindale, 2004, p. 633-4) seemed to value shared information over unshared information. On the other hand, there is some evidence that groups that had adopted norms encouraging critical thought and permitting dissent among group members provided little evaluative distinction between shared and unshared information, and validated the information used within the decision-making process using objective standards and individual thought (Postmes et al., 2001). Another effect noted in the literature that might be relevant to MEDM is the "risky shift" effect. In short, the risky shift is said to occur when

a group agrees on a course of action that is more risky than group member's individual responses would be (Moscovici and Zavalloni, 1969).

Other lines of research have also shown that collaborative decision-making can be strongly influenced by social processes. The groupthink literature, for example, has long argued that some groups make poor or irrational decisions because individuals work to conform to what they perceive other group members would want (Janis, 1982). Groupthink has been argued to be influenced by high group cohesiveness, strong and influential group leaders, and the failure to see better options other than the one espoused by the group leader. However, there has been some scepticism about the actual power of the groupthink process, and about whether the construct has actually been consistently operationalized in previous research (Aldag and Fuller, 1993).

Research, therefore, provides good evidence of the importance of social factors in decision-making processes. When group members feel pressure to conform because of the strength of the group's conviction about the "right answer" and a high need for consensus, this could have a serious impact on the validity of the MEDM process given the ambiguity of many moral issues. Similarly, people in groups might also have lower levels of personal responsibility in some cases, because being in a group can cause diffusion of responsibility, and this might be especially true in hierarchical groups. There is also some evidence that collaborative decision-making can be complicated by social norms in play.

Working through tough moral and ethical dilemmas in operations as a team will implicate social norms (e.g., demand for consensus) and processes (e.g., groupthink) that may challenge the ability of the team to make consistent and well-founded decisions. Biased sampling and other forms of human errors, goals, communication skills, weighting preferences for similarity, all have the potential to undermine good MEDM processes. However, previous research does not generally capture the full process of a team working through a moral dilemma or issue and does not capture the complexity of the context. In the end, creating a culture that emphasizes and supports norms for individual critical thinking and demands high moral sensitivity may foster better moral and ethical judgement and decision-making in team contexts because individuals can elaborate and expand their moral positions with the input of others. It will be important, therefore, to further understand the influence of norms in team MEDM, especially given the high ambiguity of moral issues.

The decision-making approach that military personnel adopt to resolve ethical conflicts in an operational context will undoubtedly vary according to the volatility of the situation. Research provided evidence that senior officers' decision-making approach did not always conform to traditional models that emphasize adherence to strict rational moral principles and axioms (Thomson et al., 2006a). Depending on the situation, senior officers suggested a variety of decision-making strategies. For example, time pressured situations fostered greater reliance on intuition or "gut instinct". However, in cases where military personnel had adequate time to reflect, they approached the moral issue more systematically and sometimes collaborated with others, eliciting others' insight and justification for the moral position. In understanding MEDM in an operational context, therefore, we must disentangle these psychological and social processes to determine whether differences in approaches reflect, for example, individual differences or situational variables. Moreover, it will be important to consider just how these processes compensate one another in order to make effective moral and ethical decisions.

Table 10. Judgment/decision-making

Main Question	Research Questions
What cognitive processes are involved in MEDM?	What does the process of MEDM look like? Is it linear? Should it be construed in phases, such as pre-decisional, decisional, and post-decisional? Are certain decision-making models more capable of producing good moral and ethical decisions? Or does it depend on the characteristics of the problem? What are the costs or benefits of rational decision-making models for MEDM? Do people exercise intuition over rationality when making moral and ethical decisions? How does this depend on situational variables (e.g., risk, time pressure)? Do people who make rational vs. intuitive decisions have different counterfactuals following MEDM? What do individuals base so-called 'intuitive' decisions on? In team contexts, are decisions more likely to be rational rather than intuitive (e.g., for purposes of transparency)? Is this influenced by available modes of communication (e.g., more limited communication may dictate more fact-based influences)?
How does framing impact MEDM?	Do individuals frame the moral issue differently? If so, how and why? Can information selectivity lead to poor choices in MEDM? What biases influence the perception of an ethical dilemma? How do anchoring biases influence MEDM?
What is the role of collaborative processing on MEDM?	What is the role of collaboration in MEDM? Does collaboration improve or hinder MEDM? To what extent do team members conform to questionable ethical decisions in the face of group consensus? Are there individual difference factors that might influence this? To what extent do team members experience diffusion of responsibility for their ethical decisions, and under what specific conditions?

2.6 Emotion

Consistent with recent scientific research, it will be critical to give consideration to the role of emotion in MEDM. As Figure 6 shows, there are a number of research domains linked with both emotions and morality, which include moral cleansing, moral outrage, moral emotions, somatic marker hypothesis, risk as feelings, and counterfactual thinking.

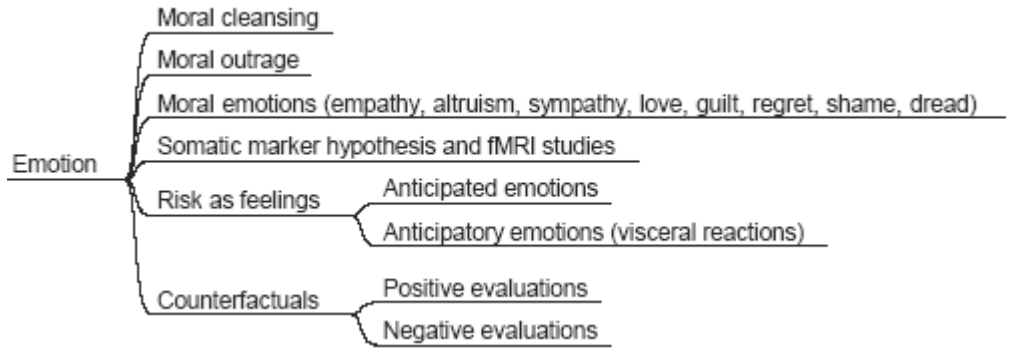

Figure 6: Emotion

Moral cleansing. Moral and ethical dilemmas often pose challenges to core values and beliefs. "Moral cleansing" is a term used to describe peoples' efforts to maintain sacred values (Tetlock, Kristel, Elson, Green, and Lerner, 2000) when these are threatened or transgressed. When values are threatened by external forces, individuals can respond in at least two ways. First, they can distance themselves from these "transgressions" through the expression of moral outrage (described in the next section). Secondly, they can use "moral cleansing" to re-establish and reaffirm the core values under assault. More specifically, the Sacred-Value-Protection Model (SVPM; Tetlock et al., 2000) argues that people actively work to protect sacred values by engaging in "symbolic acts of moral cleansing designed to reaffirm their solidarity with the moral community" (Tetlock et al., 2000; p. 855). This cleansing can take many forms, but when core values are under assault, this can be expressed as a higher probability of negative dispositional attributions, high support for punishment of violators, and strong negative affective correlates (e.g., intense reactions to violators). Expression of these negative attitudes seems to help people reaffirm their own sacred values. Encountering intense moral dilemmas is a potential affront to one's sacred values. Watching basic human rights being violated, and feeling a moral responsibility to help is likely to promote moral cleansing. Currently, however, it remains unclear how these moral cleansing processes might actually impact on MEDM processes. It may be, for example, that moral cleansing is also associated with higher than average levels of actual moral behaviour, as the "acting out" of one's sacred values may snowball into actual action to address the injustice. On the other hand, however, the "release" of re-affirming one's sacred values may either distract people from actual injustice or may provide a tension release that makes action against injustice less critical.

Moral outrage. As mentioned above, when sacred values are threatened or transgressed, people sometimes respond with expressions of moral outrage. Moral outrage can be defined as "a composite psychological state that subsumes cognitive reactions (harsh character attributions to those who endorse the proscribed thoughts and even those who do not endorse, but do tolerate, this way of thinking in others), affective reactions (anger and contempt for those who endorse the proscribed thoughts), and behavioural reactions (support for ostracizing and punishing deviant thinkers)" (Tetlock et al., 2000, p. 853-4). One interesting area of research might be to investigate the relationship between moral outrage responses and behaviour as the result of exposure to normative transgressions. Expressions of moral outrage may foster behaviour that runs counter to one's moral beliefs. One line of research could investigate participants' moral beliefs prior to exposing them to something that generates moral outrage. Following this, researchers can assess their cognitive, affective, and behavioural reactions to this transgression. This research could help

to determine the upper limits of moral outrage that provoke immoral behaviour in otherwise moral individuals.

Moral emotions. Haidt (2003) argues that there is a growing need for the appreciation of moral emotions in place of moral psychology's traditional focus on moral reasoning. Haidt (2003) categorizes moral emotions into four families, which include other-condemning (contempt, anger, and disgust), self-conscious (shame, embarrassment, and guilt), other-suffering (compassion), and other-praising (gratitude and elevation). Unlike other emotions, he argues, moral emotions can be triggered even by events experienced by others rather than being specific to one's own experience. For example, one can feel extreme disgust when watching a video of strangers being abused by police officers even without any direct personal involvement. Haidt argues that these emotions can generate responses that benefit others and the social order.

In the context of communal relationships, guilt is caused when one person feels harm, loss or distress on behalf of another, thereby appraising his or her action as bad. Guilt is caused by a transgression of moral rules and imperatives. Though many moral emotions may be at play for CF members in operations, guilt will likely be very relevant, especially in coping with difficult moral and ethical decisions after the fact. Research showed the failure to protect innocent civilians during conflicts in 1990's invoked lasting guilt in participants, despite their strong efforts to protect these civilians (Thomson et al., 2006a).

Somatic marker hypothesis. On a physiological level, Damasio's (1994) somatic marker hypothesis argues that normal decision-making is guided by somatic reactions to deliberations about alternatives that provide information about their relative desirability. In other words, these "markers" identify possible options as either desirable or undesirable based on information marked through past emotional experiences. According to Damasio, somatic markers do not necessarily help make a decision, but they do help decision makers focus on the *right* decision. In fact, related research has shown that certain neurological abnormalities that block somatic markers in participants lead to significant impairments in risky decision-making, despite participants' high functioning aptitude in the cognitive systems of the brain (Bechara, Damasio, Tanel and Damasio, 1997). Others (Greene and Haidt, 2002) have also shown how damage to the medial prefrontal cortex renders individuals' somatic markers ineffective, and consequently, in spite of retaining abstract social knowledge and cognitive functioning, they make detrimental real-life moral judgements. This suggests that *effective* decision-making is mediated more through emotion than reason (Greene et al., 2002).

Risk as feelings. Although emotion had typically been cast as having an indirect rather than direct role in decision-making, more recent research has given emotion a more direct role, as it can provide valuable information to decision makers (e.g., Loewenstein, Weber, Hsee and Welch, 2001). Loewenstein et al. (2001) argue that emotions at the moment of decision-making actually determine action and consequent behaviour. This work makes a distinction between anticipatory emotions and anticipated emotions. Anticipated emotions have typically been implicated in previous emotion research and are oriented toward the future and based on the predicted consequences of decisions. Even these emotions are typically used as inputs and the likelihood of their occurring is weighted in a slightly altered but somewhat rational process. Anticipatory emotions, on the other hand, are immediate, bodily reactions to uncertainty, which rather than hindering the decision-making process, are seen as providing another source of information. Put simply, emotions are more than simply an epiphenomenon that influences the cognitive processes underlying decision-making. Rather, emotions are argued to have a discrete and, more importantly, independent influence on decision-making. Moreover, there are also many cases in which the

emotional reactions to stimuli diverge from the cognitive assessments of these situations. In such cases, Loewenstein et al. (2001) hold it is the emotional reactions rather than cognitive assessments that drive behaviour.

It follows, then, that if cognitions and emotions have discrete impacts on decision-making processes, there may be cases in which cognition and emotion have different implications, or are not entirely compatible. This divergence of emotional responses from cognitive evaluations of risk is largely the focus of the risk-as-feelings hypothesis, and it attempts to address two perspectives: (1) the fact that emotions impact on decision-making, and (2) the fact that anticipatory emotions often diverge from cognitive evaluations.

Research in a related area has explored the attributional weight associated with immoral behaviours. Traditionally, researchers working to understand why negative behaviour gets more attention than positive behaviour have often seen this fundamental asymmetry in primarily cognitive terms (i.e., that negative information is less common, so it receives more attention because of its novelty). However, research by Trafimow, Bromgard, Finlay, and Ketelaar (2005) presents evidence that what impacts on the attributional weight given to immoral behaviours is sometimes not cognitive at all, but the product of the affect inherent when important norms are violated. Of course, events that violate more critical norms will have more attributional impact than those that violate less critical ones. This suggests, then, that the power of negative information is not just in its novelty, but in its connection to its ability to inspire affect. This research provides even more support for the importance of considering the role of affect in MEDM.

Counterfactuals. The emotions associated with previous decisions can also influence our perceptions of the outcomes of decisions. In short, counterfactual thinking refers to thoughts about what might have been (Roese, 1997). This kind of thinking has been associated with negative behaviours, such as regret, despair or a deep sense of loss, because of “upward” or “better than actuality” evaluations (Roese, 1997). However, counterfactual thinking can also produce positive emotions as a result of “downward” or “worse than actuality” evaluations.

Previous research has provided some evidence of the important role of counterfactuals at the post-decisional level by individuals having made difficult ethical decisions (Thomson et al., 2006a). In fact, some senior officers noted the need to “not look back” and to imagine retrospectively how they could have done better. In this sense, they seemed to actively resist counterfactual thinking. At another level, however, some officers also noted that the outcome of their decision could often have been much worse. This shows evidence of a downward comparison. Despite the fact that not all aspects of the outcome were positive, many senior officers saved lives that would not otherwise have been saved. This tension between using counterfactuals optimally (e.g., to cast their own accomplishments in a more positive light) versus cultivating feelings of guilt and regret is clearly one worthy of further investigation.

Of particular interest is the role of collaborative moral and ethical decision-making in the use of counterfactuals. For example, it would be interesting to know whether people that work in teams to make ethical decisions are any more or less likely to use counterfactuals. It seems that one of the major drivers of post-decisional regret is a strong sense of personal responsibility and accountability. However, when ethical decisions are made more collaboratively, team members could arguably be less likely to engage in negative counterfactuals if responsibility and accountability is more distributed across all members of the team. This remains an interesting empirical question.

Table 11. Emotions

Main Question	Research Questions
What is the impact of moral cleansing on MEDM?	What kinds of moral behaviour can be attributed to moral cleansing? In other words, what does moral cleansing look like?
How does moral outrage impact moral behaviour?	Does moral outrage lead to positive or negative moral behaviour? How does moral outrage move from mere cognitive and affective appraisals to behavioural reactions? In other words, when does moral outrage translate into behavioural reactions? What are the upper limits of moral outrage that lead to moral or immoral behaviour?
How do emotions influence perceptions of morality?	How does affect influence the attribution of moral vs. immoral behaviours?
How can emotions assist us in making good moral and ethical judgements and decisions?	How do we train soldiers to attend to the proper moral emotions to make good moral decisions? How do we learn to listen to our moral emotion over our cognitive appraisal of a moral issue? And when is it appropriate to do this? When and how do moral emotions jeopardize or enhance the deliberation process? Do positive counterfactuals assist CF personnel who have faced "lesser than two evil" moral dilemmas? If so, how does this appraisal literally supplant negative counterfactuals and what factors impact this? What is the role of counterfactuals in collaborative team decisions?

2.7 Moral Motivation and Behaviour

Another important research area pertains to the link between moral judgements and moral action. Even individuals with the same level of moral knowledge (i.e., understand what *is* right and what *is* wrong) may not always behave similarly. As such, understanding the link between moral motivation and behaviour will be an important contribution.

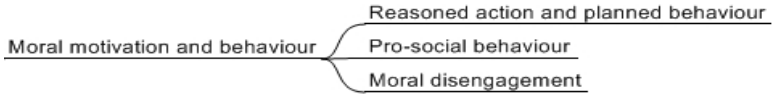

Figure 7: Moral motivation and behaviour

Theory of reasoned action and theory of planned behaviour. Several existing lines of research are relevant to the moral motivation vs. moral behaviour issue. A pervasive question in the psychological literature is how attitudes translate into actual behaviour, and considerable research has focused on the prediction of behaviour from attitudinal variables. One such approach is the

theory of reasoned action (TRA; Fishbein and Ajzen, 1975; presented in Eagly and Chaiken, 1993). As seen in Figure 8, the TRA holds that "behaviour is a function of one's intention to engage in the behaviour which is, in turn, a function of both one's evaluation of personally engaging in the behaviour and one's belief that significant other people think one should engage in the behaviour" (Eagly and Chaiken, 1993, p.169).

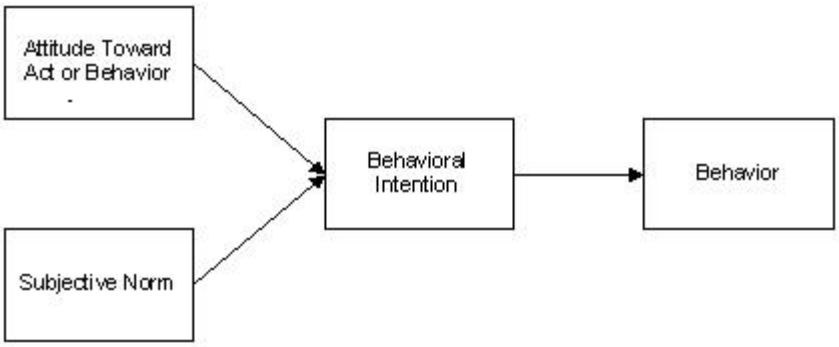

Figure 8. Theory of reasoned action (Fishbein and Ajzen, 1975; represented in Eagly and Chaiken, 1993).

In other words, attitudes and/or subjective norms predict intentions which in turn predict behaviour. Eagly and Chaiken (1993) explain that a subjective norm is a function of normative beliefs based on significant others' beliefs that one should engage in the behaviour. It should be noted that individuals differ in the weights they place on attitudes and norms when forming behavioural intentions. However, behaviour can be predicted by multiplying the attitude toward the behaviour by the motivation of the individual to comply with others' expectations (Ajzen, 2001).

The TRA has been tested empirically across a variety of studies and has fared well for predicting some linkages between attitudes and behaviour. For instance, the model has successfully been applied to strategy choices in Prisoner's dilemma games, blood donation, voting, church attendance, and purchasing various consumer products (Eagly and Chaiken, 1993). The model has also been applied to unethical and moral behaviour. For instance, when used to explain unethical behaviour in organizations, the model predicted cheating in two colleges (Randall, 1989) even though several external variables, such as firm size, job title, etc., were weakly related to unethical behaviour.

However, one of the problems with the original TRA model was that it assumed that once people form an intention they are free to act as they wish, though certain constraints may limit behavioural actions. To address this, Ajzen (1991) proposed an enhanced model labelled the theory of planned behaviour (TPB). A number of studies have consistently found that the prediction of the behaviours was improved by adding perceived behavioural control as a predictor including the prediction of behaviours such as election participation, shoplifting, and gift giving (Eagly and Chaiken, 1993). The TPB has been also shown to be particularly adept at predicting the link between health-related intentions and behaviour (Godin, Conner and Sheeran, 2005).

A recent review of literature more relevant to moral and ethical attitudes and behaviors has concluded that although moral norms have a powerful influence on intentions to act, there is little evidence in the literature that moral norms actually predict behaviour (Godin et al., 2005). In

general, however, research has suggested that individuals whose moral norms and intentions are aligned are more likely to engage in behaviour than individuals whose attitudes and intentions are misaligned, but only when individuals also consider the behaviour to be morally relevant. Presumably, intentions based on personally held moral norms are more central to the self and hence more predictive of congruent behaviour because "personal norms focus exclusively on the evaluation of behaviours in terms of their moral worth to the self" (Schwartz and Howard, 1984; cited in Godin et al., 2005). Consistent with this finding, studies have shown that self-identity accounts for significant variability in behavioural intentions, over and above the impact of attitudes and subjective norms. For instance, the inclusion of self-identity has shown to account for additional variance in adherence to a low-fat diet (Ajzen, 2001). As noted earlier, then, research supports the notion that a self-identity that holds morality central to its core definition can lessen the intention-behaviour gap.

Prosocial behaviour. Another way to understand moral behaviour is to explore its correlates. Prosocial behaviour can be understood as acts defined by a society or a social group that are deemed beneficial to others. Although not all prosocial behaviour necessarily has a specific ethical component, there is still a connection between some forms of prosocial behaviour and moral behaviour. Seminal research exploring prosocial behaviour investigated the conditions under which people help other people. For example, research exploring the bystander effect showed that people were less likely to help if other people were seen as likely to do so (e.g., Darley and Latane, 1968). Breaking from traditional approaches to investigating prosocial behaviour, Penner, Dovidio, Piliavin, and Schroeder (2005) suggest a multilevel perspective to understand the ways in which prosocial behaviour can be expressed, and the processes underlying prosocial behaviour. The first "meso" level is the study of interpersonal, helper-recipient pairs in the context of a specific situation. It investigates when and why people help, the unconscious influences, and the intergroup influences on helping. The second "micro" level examines the origin of prosocial tendencies. Finally, the third "macro," level examines prosocial behaviour in large organizations. In these contexts, individuals are mutually interdependent and prosocial behaviour has implications for personal and collective outcomes.

One area of prosocial behaviour particularly relevant to the CF is motivation that contributes to members going "beyond the call of duty" and behaving morally even when it is not necessarily in their best personal interests to do so.

2.7.1 Proposed area of focus – The process of moral disengagement

Another critical area of focus for the MEDM research program is exploring the process of moral disengagement. How and why seemingly moral human beings commit atrocities against other human beings will be important to investigate in any program of MEDM in an operational context. Moral disengagement can promote immoral behaviour because it diminishes the conventional standards of right and wrong that often govern human behaviour, either by attributing blame to the victims or by re-construing other aspects of the situation in order to justify immoral behaviour. Some of the atrocities that have emerged from recent operational theatres include cases of torture, rape, and mass execution. Recent news stories of American soldiers gang-raping and then killing a young Iraqi girl and her family point to the potential for moral disengagement within stressful combat situations.[2] Although it could be argued that such conduct could be the result of

[2] Available accounts of this incident, of course, do not conclusively and specifically implicate moral disengagement. However, this is one possible explanation.

generalized depravity, such explanations are often incongruent with post-hoc descriptions of accused perpetrators depicting them as decent and law-abiding people. Unethical or immoral behaviour could reflect a temporary lapse in moral self-censure on the part of decent, moral individuals. Albert Bandura (2002, 2004) has written a number of articles investigating moral disengagement in related contexts (namely, terrorism and counterterrorism). These articles describe a number of social and psychological processes that might help explain why decent, moral individuals can at times engage in destructive behaviour.

According to Bandura (2002, 2004), the ability to self-regulate one's own behaviour is a critical human capacity. Through self-observation, comparison of their behaviour with standards that they judge to be important, and self-response, people work to ensure that their own behaviour is in line with both their own goals and with the demands of their environment. This self-regulation process can work to promote critical prosocial behaviours. However, these same self-regulatory mechanisms can also prevent us from engaging in inhumane activity. Through these self-regulatory mechanisms, people judge their position relative to their own internal standards, and monitor and guide their own behaviour in accordance with these standards. When these self-regulatory mechanisms are in place, acting contrary to these standards results in self-condemnation. But, when these self-regulatory mechanisms break down, moral disengagement can enable people with the same moral standards to behave in very different ways.

Several different processes can work to promote moral disengagement and to enable morally reprehensible behaviour. These include cognitive restructuring of destructive conduct, diminishing one's perceived role in causing the harm, and dehumanizing the recipient of the destructive conduct. Cognitive restructuring of destructive conduct can taken many forms, including moral justification, advantageous comparisons, and euphemistic labelling (Bandura, 2004). The first, moral justification, involves portraying destructive conduct as acceptable because it serves noble ends (e.g., religious ideologies, nationalistic ideologies, etc.). Most societies prohibit killing. However, when people are called to arms to defend a cause, this cognitive restructuring can turn them into "skilled combatants" who see themselves as serving morally justifiable ends. One need only think of the crusades, the current jihad waged by Osama bin Laden, or any violent struggle for recognition, to see the power of shutting off self-regulatory mechanisms by redefining previously immoral actions as justifiable (Bandura, 2004). Another process that promotes moral disengagement involves comparing one's actions with more undesirable alternatives (e.g., terrorists justifying their actions through previous injustices). Moreover, as Bandura (2004) explains, historical accounts are often good comparisons to justify one's own destructive conduct, such as arguments that most fledgling democracies emerge out of armed conflict. These advantageous comparisons help to morally justify one's own destructive conduct. For example, arguing that war waged against terrorism will prevent greater human suffering that arises from terrorist action portrays the human suffering caused by terrorism as more dangerous than the war seeking to prevent terrorism (Bandura, 2004). In Bandura's (2004) words, "the more flagrant the contrasting inhumanities, the more likely it is that one's own destructive conduct would appear trifling or even benevolent". Finally, euphemistic labelling (using more desirable labels) can also promote moral disengagement, because it includes sanitizing the language so that harmful acts look more

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http://www.nytimes.com/2006/08/05/world/middleeast/05abuse.html?ex=1154923200anden=54127265a5ff69a9andei=5087%0A

acceptable. For example, describing dead civilians as “collateral damage” is a common example of euphemistic labelling.

Diminishing one’s perceived role in causing harm is another way to morally disengage. One way to accomplish this is through displacement of responsibility (Bandura, 2004). For example, viewing one’s actions as emerging from the authority of another decreases personal responsibility and reduces the likeliness of self-condemning thoughts and feelings. A displacement of responsibility, Bandura (2004) adds, can decrease the overall concern one has for the well-being of those harmed by his or her destructive actions. Diffusion of responsibility also helps to diminish a sense of one’s perceived role in causing harm. This can be achieved through a division of labour (partial contribution focuses our attention to the details of the job and not its meaning) and group decision-making (Bandura, 2004). According to Bandura (2004), another means of diminishing one’s perceived role in harm is to distort or downplay the harmful actions. For example, with the high sophistication of modern technological warfare, destructive actions are often more remote both physically and temporally. As such, self-regulatory mechanisms that would otherwise prohibit causing deliberate harm to others are likely to be disabled. This, of course, could promote moral disengagement on the part of decision makers.

Moral disengagement also occurs through the process of the dehumanizing the victims of our destructive actions. Dehumanization involves stripping away a victim’s distinct human qualities, and sometimes adding corrupt attributes. According to Bandura (2004), this practice makes victim suffering less salient, and makes people likely to empathize or sympathize with the victim. Finally, transferring blame to circumstances or adversaries (e.g., believing that the other person had it coming or left no other alternative) is also an effective means of self-exoneration (Bandura, 2004).

As a whole, these moral disengagement processes have the potential to interfere with the normal self-censure processes that promote and sustain moral behaviour. They are often interrelated, working in tandem to erode moral control mechanisms (Bandura, 2004). In fact, there is a good body of evidence suggesting the power of moral disengagement in harming others, either in larger scale inhumanity such as terrorism (Bandura, 1990) or at a smaller scale. For example, research has shown higher levels of moral disengagement in executioners than in any other parties involved but not personally responsible for prisoner executions (Osofsky, Bandura and Zimbardo, 2005), and in the seminal Zimbardo prison study (Zimbardo, 1969). In the long term, moral disengagement seems to have the potential to promote alienation from self, wherein a person performing actions that are incongruent with his or her moral standards is increasingly cut off from ownership of his or her behaviour. For the future, then, it will be necessary to understand how and when moral motivation is transformed into actual action as well as understanding the moral disengagement processes that might deter this from happening. The process of moral disengagement will be important to understand in more detail as our research program proceeds.

Table 12: Moral motivation and behaviour

Main Question	Research Questions
In what way does TRA and TPB further our understanding of MEDM?	How does the theory of reasoned action further our understanding of moral motivation? Does the theory of planned behaviour help explain moral motivation?
What are the processes underlying pro-social behaviour?	Where does the desire/intention to engage in pro-social behaviour emerge? What character traits are associated with pro-social? Does engaging in pro-social behaviour impact moral development? What does the CF view as pro-social behaviour? How do we understand pro-social behaviour in a regimental culture? What socialization processes exist in the CF that foster pro-social behaviour?
What is moral disengagement in a military context?	How are we to understand moral disengagement in a military context? What training or processes would lower moral disengagement? At what point do individuals become morally disengaged from their typical standards of right and wrong? Is there a threshold at which point it becomes easier to disengage? How do individual differences impact moral disengagement? How does moral identity impact moral disengagement? Are individuals with weak moral identities more likely to morally disengage compared to individuals with strong moral identities or vice versa? What is the relationship between the "moral mandate effect" and moral disengagement? What CF training mechanisms prevent moral disengagement?

2.8 Summary

There are many possible areas for future MEDM research. This chapter described a broad framework indicating many of these sets of factors. Within each of these sets (other than contextual or situational factors, which are more likely to be used in combination with other sets), additional attention was then devoted to specific constructs (e.g. self identity) that seem most likely to contribute to critical CF/DND needs as well as to current theory and research in moral psychology.

For person-based factors, we showed the importance of self-identity in understanding moral functioning. The literature suggests that individuals require more than mere moral knowledge to actually act morally (viz., simply knowing that *x* is right does not necessarily guarantee that one will do *x*). It is argued that self-identity bridges the gap between moral understanding and moral behaviour if morality is central to one's sense of self (Blasi, 2004, 2005). A failure to act consistently with one's self-identity (or moral identity) leads to self disintegration. This idea is predicated on the assumption that individuals are motivated to remain "true" to who they think they are.

Team diversity was also viewed as a relevant construct for investigating MEDM in CF operations. As the CF accommodates numerous cultures within its own ranks, and teams made up of individuals from different backgrounds that may have different sets of standards for decision-making and behaviour are increasingly likely. This might present challenges when it comes to resolving moral and ethical dilemmas in operations. As well, the CF will be involved in a number

of missions where CF personnel will be required to work with members from other forces. For example, United Nations Peacekeeping efforts might include teams that are made up of individuals from a number of different cultures. Balancing one's own national culture with another's may reveal different moral perspectives. As such, how team diversity impacts MEDM will be a particularly important construct for the research program.

Consistent with future prevalence of team decision-making, we also identified the role of collaborative processing as a relevant construct for understanding MEDM in CF operations. In-person interviews with senior CF commanders suggested that moral dilemmas were at times resolved with and through other people (Thomson et al., 2006a). The assertion that people always make moral decisions by appealing solely to their pure reason is no longer sustainable, in light of empirical evidence that individuals often make decisions in social exchanges with other people (Haidt, 2001). The social intuitionist model suggests there is a push and pull between players, thereby emphasizing the social context of MEDM. Given that CF members often function in team contexts when faced with difficult ethical dilemmas, research in this area should be given high priority.

Finally, we identified moral disengagement as another important construct in understanding MEDM in CF operations. The observation that seemingly moral individuals can act immorally at one moment and morally in another is very striking, and the literature raises a number of psychological processes that try to explain this paradox (Bandura, 1990, 2002, 2004). However, as there appear to be very few studies that have experimentally explored the moral disengagement construct, research in this area is also likely to be valuable.

Any one or all of these focus areas could be pursued in the current ARP. The following chapter suggests a number of potential studies, for example, in CF field training settings and in computer simulations that would hopefully further our understanding of these constructs and of moral and ethical decision-making in an operational context.

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3 Proposed Research Approach

This section explores the proposed milestones of the applied research program for the Moral and Ethical Decision Making Project. Congruent with the areas of focus proposed in the previous section, this section defines specific research efforts that could be undertaken to explore the proposed focal areas. Following this, several sections explore additional research considerations and challenges before a summary of this report.

3.1 Milestones of the Applied Research Program (ARP)

The existing Applied Research Project (ARP) for DRDC Toronto's Moral and Ethical Decision Making in Operations Project proposal identifies 13 different milestones, as shown in Table 12.[3]

Table 13: Applied Research Program Milestones

	Work Item	Date Proposed in ARP	Actual Date
1	Development of theoretical model of MEDM	April/06 to March/08	Draft completed
2	Examination of multinational perspectives on MEDM	April/06 to March/08	Not started
3	CF Predeployment Training Field Trial I	April/06 to March/07	Report completed
4	First person gaming experiment I	April/06 to March/07	Not started
5	CF Predeployment Training Field Trial II	April/07 to March/08	Data Collected
6	First person gaming experiment II	April/07 to March/08	Not started
7	CF Predeployment Training Field Trial III	April/08 to March/09	Not started
8	First person gaming experiment III	April/08 to March/09	Not started
9	University-based lab experiments	April/06 to Mar/09	Ongoing
10	Model testing and lab-based simulation of CF Predeployment Human Rights Violation training	April/06 to March/09	Started
11	Review of CF training procedures relevant to MEDM	April/06 to March/07	Report completed
12	Documentation of experimental results	April/07 to March/09	Ongoing
13	Proposal and guidelines for development of training procedures for MEDM	April/08 to March/09	Not started

These milestones are provisional and subject to change as the ARP evolves. This section works to identify potential approaches to addressing existing milestones.

[3] ARP progress as of February 2007.

3.1.1 Theoretical Model of MEDM (Milestone 1)

A future research program should be grounded in a general model of MEDM that is applicable in operational contexts. This model needs to be comprehensive and to include the most significant person-based, contextual and situational factors. A robust model must account for both the cognitive and the social psychological processes that are in play during moral and ethical judgement and decision-making.

At present, the research team has drafted a preliminary framework that identifies and begins to explore the many factors that influence MEDM within operational contexts.[4] This framework derives from the processes and variables identified in current research and theory from both the military and psychological domains. This framework should be a "living" document, so that the framework is continually revised and elements added as the research program learns more about MEDM in operational contexts.

3.1.2 Examination of Multinational Perspectives on MEDM (Milestone 2)

As noted earlier, there are many different forms of diversity. A key question for the CF is the impact of culturally diverse backgrounds on MEDM within military teams (e.g., United Nations Military Observers). Canadian soldiers on multinational operations often interact with people from diverse cultural backgrounds. Past research has shown that military personnel from different cultures often view human life differently as well as exercise very different ethical standards and practices in operations than do members of the CF (Thomson et al., 2006a; Thomson et al., 2007). For instance, a few CF training instructors felt that Canadian soldiers sometimes rush into a situation, failing to appreciate and respect the cultural nuances of other nations (Thomson et al., 2007). Similarly, in a half-day focus group discussion investigating training MEDM for operations, a small group of CF military personnel who had deployed on morally and ethically challenging operations in the past also noted the importance of cultural training for CF members prior to all deployments (Thomson, Lee, and Adams, 2006b). Unlike WWII operations where allies were unified against a common enemy, current day operations incorporate a number of national and political interests, and involve players from many nations, often with diverse goals. As CF operations become more multinational and complex, exploration of the impact of diverse cultural background on moral judgement and decision-making will be a significant component of this applied research program.

Given that the CF is likely to work increasingly in multinational teams and in light of the emphasis on culture implicit in the current re-alignment of DRDC Toronto, it may be valuable to begin to address this issue by reviewing the relevant academic and military literature relevant to diversity and decision-making in order to better understand how diversity might impact on decision-making processes (with specific focus on ethical decisions). As noted earlier, academic research seems to be equivocal about the impact of cultural diversity on team process and performance, but only a limited number of articles could be accessed for this review due to time constraints. As such, it may be helpful to undertake a thorough literature review exploring relevant theory and research related to the potential impact of team and/or cultural diversity on team process and performance, with a specific emphasis on MEDM. This review should bring together existing theories and models of cultural diversity that might be relevant as well as to identify the factors that influence the impact

[4] Elements of the framework were detailed in the preceding chapter; however, the full framework is presented in Annex A.

of diversity on team performance. Although it is unlikely that a clear and concise answer about the relationship will emerge, it is still critical to begin to place dimensions in the problem space more systematically.

Another potential means of exploring the impact of cultural diversity on MEDM is reviewing video footage from the debriefings of training scenarios that students received as part of their predeployment training. For instance, the field study undertaken for Milestone 5 also collected recordings of debriefings given to trainees by the directing staff. This video is a potentially rich source of information, as it provides retrospective insight into what team members were thinking and feeling when they confronted a serious human rights violation, and were forced to choose how to react to this ethical situation. Cursory and informal observations suggest that some cultural differences may be seen in student recollections of MEDM on the stand. However, the exact cultural nuances have not been subjected to systematic analysis. This could be explored further within the applied research program.

3.1.3 CF Predeployment Training Field Trials (Milestones 3, 5, 7)

The last fiscal year (March 2005 – March 2006) has been very busy, as the research team worked to build and solidify a strong working and mutually benefiting relationship with a CF training unit that conducts predeployment training that includes MEDM. This process has been very productive, yielding both a good quality relationship as well as an excellent venue for the collection of field data.

Milestone 3 (the first CF predeployment field study) was completed in March 2006, and it was highly successful. This field study explored the issue of moral intensity in the context of an emotionally charged human rights violation stand (Thomson et al., 2007). At a general level, this study explored an important situational attribute. Results showed that although varying levels of moral intensity did not appear to impact trainees' moral and ethical judgement and decision-making, moral intensity did impact substantively on their behaviour. Teams that had experienced a face-to-face interaction with the female victim, i.e., high moral intensity, were twice as likely to insist on following the military police (MPs) and the victims to the police station and were less likely to either leave or simply watch as the victims were escorted away.[5] Importantly, this research has been presented to the relevant CF pre-deployment training staff, so that they may integrate the findings into their training.

Milestone 5, the second CF predeployment training field study, is currently underway. This field study attempts to change the scenario by presenting either an angry military police negotiator to the students or the typical "baseline" MP who is not angry. Existing research predicts that negotiation behaviour can be influenced by the emotional intensity of the negotiators (Van Kleef, De Dreu, and Manstead, 2004). Specifically, when confronted with another person who is angry, negotiators may either become angry themselves (known as the social contagion effect) or may attend more to their opponent's anger and consequently become more conciliatory and work to de-escalate this emotion level (known as strategic choice). The study now underway explores trainees' moral decision-making and their negotiation behaviour when they confront either a very angry MP (or a more typical MP) in working to resolve a morally challenging situation.

The training scenario currently used in the field studies has 3 different players, including the victims, the MP, and the student teams themselves. The first two field studies manipulated victim

[5] For a full description of the study, please see Thomson and Adams, 2006.

behaviour (i.e., proximity to the student teams) and MP behaviour (i.e., making the MP either angry or not during negotiations). A natural progression for Milestone 7 would be to manipulate some aspect of the trainee teams' behaviour. The ability to work effectively as team is a primary objective of CF predeployment instruction, and negotiation training touches on the need to work as a team in order to work through the stands in a dismounted training exercise. However, on this stand (as well as on the other stands), student teams are not provided with any explicit instruction related to working together as a team. Not surprisingly, then, videotape analyses from the first two field studies show that most student teams typically functioned relatively hierarchically, with the team lead for the stand taking the primary role in negotiating with the lead MP. This leader often appeared to take responsibility for making the team's ultimate decision as the stand moved toward its conclusion (i.e., to leave, watch or follow the civilians).[6] One possible experimental manipulation would be to ask teams to deviate from a typical hierarchical approach to one in which the leader must take time to communicate with all the members of the team and getting their views of potential courses of action before committing to one in particular. Put simply, this manipulation would force teams to work collaboratively. In this experimental condition, trainees might be told that they must make their decision as a team, and they would be encouraged to "step away" from the negotiation when necessary in order to work through their options, and decide as a team what to do. In the other condition, teams would be asked to use the typical leader-only approach and for the team leader for the stand to assume the majority of the responsibility for the decisions that need to be made. Following the resolution of the stand, experimenters could administer questionnaires investigating the team decision-making processes. Questions could include individual perceived input in the team decision; satisfaction with the team decision; changes to the team decision-making process had trainees the ability to redo the scenario; etc. With the help of CF predeployment training staff, debriefs could also be used to address some critical points of team decision-making by asking specific questions related to the decision-making processes that the teams undertook.[7]

Systematic understanding of team processes and their outcomes in training such as this would be of great value to the CF predeployment training process. The results may provide CF pre-deployment trainers with some systematic evidence of the extent to which this team decision-making approach is associated with overall better courses of action in this very demanding stand. Moreover, this proposed study is in keeping with the research team's desire to progress from the individual level MEDM to the team level as well as a natural progression of the existing program of research. However, other research priorities may also emerge from analyses of the data from the current study.

For the future, many different research questions could be meaningfully addressed in the context of the human rights violation scenario. However, the research questions that can be asked will continue to be at least somewhat constrained by the need to give primacy to the training needs of CF. Continuing to ensure as little disruption as possible to the CF predeployment training system will be critical to continuing and furthering our relationship with them. However, provided we continue to work on minimizing any negative impact on training, there are very positive signals of CF's increased willingness to accommodate our research needs.

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[6] Of course, this was not the case for all teams, and many showed some collaborative processes. The intent of this manipulation is to maximize collaborative processes in all teams, but to reduce it in others.

[7] Of course, all research ideas will be contingent on CF predeployment procedures and training needs, and the research team may need to modify pending feasibility discussions.

Lastly, as two of the three planned CF predeployment training milestones have already been addressed, it might be advantageous to consider re-assigning additional milestones to this venue in 2008. This would ensure continued regular contact and collaboration with those involved in CF predeployment training at a specific CFB.

3.1.4 First Person Gaming Lab Experiments (Milestones 4, 6, 8)

The first person gaming lab at DRDC Toronto provides many opportunities to investigate moral and ethical judgement and decision-making in a more controlled setting. Several research questions seem well suited to the laboratory context because of the additional level of experimental control afforded there, as well mitigating some of the practical difficulties of working in a field context. Today's gaming software, such as Rogue Spear or Never Winter Nights (NWN), provides a high degree of realism to readily engage the player, the ability to create a variety of missions (e.g., combat, crowd control, hostage negotiation and rescue), the ability to tailor these missions to specific research requirements, and accommodate multiple players. Initial exploration of NWN suggests that may be a viable instrument for investigating MEDM. The Humansystems team has demonstrated simple modifications, such as creating a realistic environment (e.g., Afghanistan desert) with simple objects (such as tents, bridges, fences) and Non-Player Characters (NPCs). Basic movements of NPCs can be predetermined, for example, using the wayfinding command in the toolbox. NPCs can also be scripted to move at a specific moment in time. The DRDC Toronto research team has also been working at using NWN to model decision trees emerging from the first Moral and Ethical Decision Making field study. It would be beneficial for the contractor and defence science members of the M and E research team to convene at DRDC in order to discuss and further elaborate the potential applications for NWN, in order to understand both the decisions that people make when faced with a moral dilemmas as well as the reasons for these decisions. It might also be beneficial to talk to researchers from the US Air Force Research Laboratory (AFRL) and US Army Research Laboratory (ARL) who have used NWN for investigating culture and cognition (Warren, Diller, and Sutton, 2005) and culture and personality (Warren, Sutton, Diller, Ferguson, and Leung, 2005).

Many of the research areas identified earlier in this report would be amenable to exploration in the 1st person gaming lab. For example, Milestone 4 could explore the connection between self-identity and moral motivation/behaviour in a gaming simulation where moral and ethical decisions have to be made, consequent behaviours have to fulfilled, and tasks have to be completed. As noted earlier, the intention to act morally does not necessarily translate into moral behaviour. Theorists have argued that a self-identity where morality is central to one's sense of self is likely to be associated with higher levels of moral motivation, and to be more likely to lead to moral behaviour because failure to act morally would be incongruent with the sense of self (Blasi, 2005).

One approach could involve capturing pre-existing levels of moral identity (e.g., strong vs. weak) perhaps through administering existing measures of moral predisposition or orientation prior to experimentation (Reed and Aquino, 2003; Brady and Wheeler, 1996, cited in Reynolds, 2006; Walker, 2004; Catano et al., 2000). Following this, participants could undertake a tactical assault mission that is scripted to provide soldiers with an option to act morally and to engage in pro-social behaviour (e.g., saving someone or preventing civilians from being caught in the cross fire) or the ability to "opt out", choosing not to take responsibility for civilians when doing so would put them at a high risk. Such a situation could be created by scripting a scenario in which mission rules of engagement (ROE's) do not require forces to take responsibility for the civilians. Moreover, if participants are led to believe that they have inadvertently received information about civilians

potentially in danger, they literally have the ability to choose whether or not they will be involved. The performance of individuals with varying levels of moral identity could be captured using a video-out function on the gaming computers, as well as ensuring the capture of performance data provided by the gaming software (e.g., rounds taken, rounds shot, etc.). Qualitative data could also be collected in mission debriefs in which soldiers have to justify their actions, and it will be calibrated with quantitative questionnaire data investigating self-identity and moral motivation and behaviour. Many different questions could be explored, including whether people with a high moral identity are actually likely to behave differently (when to do so puts them at great risk) or whether it merely motivates them to want to do more (moral motivation).

This kind of study, of course, would depend on having a relatively large sample, in order to have adequate numbers of people with strong and weak moral identity. Perhaps a more feasible alternative would be to experimentally manipulate the moral identity of participants. For example, the literature would imply that strong moral identity might be promoted by exposing participants to moral exemplars, e.g., individuals who have behaved morally despite a high personal level of personal risk for doing so. With proper pre-testing of strong and weak identity-provoking scenarios, this approach would allow studies of moral identity and moral behaviour with more modest sample sizes. Another potential way to attempt to manipulate moral identity would be through the presentation of moral exemplars that are likely to inspire a strong sense of moral responsibility and ownership or perhaps inspire moral "traits" relevant to CF personnel, such as courage or integrity. Within the military context, for example, reading scenarios elicited from senior CF commanders who made difficult ethical decisions under very trying conditions would be one way to attempt to invoke moral identity (Thomson et al., 2006a). As noted earlier in the document, however, this kind of approach would need to ensure that such moral exemplars actually inspire rather than de-motivate (e.g., Lockwood and Kunda, 1997, 1999). Indeed, there is some evidence that exposure to high-achieving role models might actually undermine motivation. However, the most frequently invoked categories of moral exemplars are not public heroes, such as Martin Luther King, but family and friends, which are much more tangible (Walker et al., 1995). Asking participants to generate their own example of a moral exemplar might help to better understand the relationship between moral exemplars and moral motivation.

Milestone 6 could also use the first person gaming lab and focus on team MEDM during the typical military task of maintaining a checkpoint. As one example, a team composed of 2 – 4 members could be stationed at a checkpoint on the periphery of a busy local market. Using experimenters as confederate civilians, these civilians would be scripted to engage in ambiguous activity that could be perceived as suspicious (e.g., fiddling with clothing, looking around repeatedly, showing a weapon briefly).[8] Then, at a predefined point (about halfway through the scenario), one of these civilians would approach the checkpoint. The confederate civilian's actual objective would be unclear to participants, but given the context and their previous suspicious behaviour, checkpoint teams may be more likely to expect a civilian to either detonate a bomb than they would expect the civilian to simply move through the checkpoint in order to access the area beyond it. The team would need to decide how to respond to this activity, whether to shoot the civilian before he is close enough to be harmful (if wearing explosives), or whether to allow the civilian to move within a potentially lethal distance. At the critical decision point, the mission will be "frozen" and teams will be instructed to work together to decide how they will behave once the scenario resumes. Teams will also be asked to justify their decision. Many different experimental variations are

[8] The ability to program these behaviours in the 1st person gaming laboratory needs to be confirmed.

possible, including promoting varying levels of suspicion in the team via briefings about probability of potential terrorist activity, imposing different expectations for resolution of the dilemma (e.g., full consensus within the team vs. majority rules), activating different group norms (e.g., consensus norm vs. individual critical norm), or raising accountability levels by imposing expectations of a very intense justification process (e.g., they should expect to stand trial in a tribunal if they make the wrong decision about the true intentions of the civilian). It would also be possible to provide varying rules of engagement that provided either clear or ambiguous instruction about what to do in this situation (e.g., only engage in self-defence). Within the scenario, other variables such as avatar characteristics (e.g., male or female) or behaviour could also be manipulated. Quantitative data could be collected through the gaming software and through the capture of all team communications, self-report data through questionnaires, and qualitative data related to the decision-making processes that teams used could also be derived in post-mission discussions.

Milestone 8 could explore some of the issues associated with moral disengagement. One possible line of research could explore factors that might lessen the ability to morally disengage from a situation. For example, it would be possible to attempt to manipulate moral disengagement in the context of the first person gaming lab. This could be attempted by systematically attempting to influence the psychological processes that would either hinder or promote moral disengagement. For example, providing personal information about the goals and aspirations of the targets vs. providing strong evidence of their malevolent intentions may have very different implications for the levels of participants' moral disengagement. Similarly, other research scenarios could also be designed to heighten the probability of moral disengagement. For example, one of the most important mechanisms of moral disengagement is the distance between an immoral action and the issuer of the command to commit the action. Bandura (2004) argues that in a hierarchical institution, moral disengagement is easiest for those who are the intermediaries between those who issue the command and those who actually fulfil it. This is the case because intermediaries merely act as the messenger between the intent and the action, and as such are not engaged in developing that intent or acting on it. It seems, therefore, that responsibility is diminished. However, at all levels in command, there is the demand on behalf of the soldier considering whether this is a lawful command or not. It might be interesting to investigate factors that may either promote or hinder the posited diffusion of responsibility (and hence, moral disengagement) as orders move down the chain of command.[9] Varying the distance of the person making the moral decision would be an interesting issue to explore. This is a particularly critical question given the movement toward the decentralization of authority and command being executed at a lower level than ever before. As a whole, this kind of research could investigate the differences in moral motivation and moral action toward adversaries within a gaming environment. Helping participants to understand the differences in moral disengagement (quite independently of the objective truth about their adversaries) would be an important contribution.

Similarly, one of the potential problems with ensuring ethical behaviour within a group setting is that one "bad apple" has the potential to adversely affect the moral stance and behaviour of other people. Indeed, when individuals are in a situation in which their team members seem morally

[9] However, although the moral disengagement construct has been framed primarily in terms of the commitment of immoral acts, the moral intensity of even a fully lawful act might also become dangerously diluted when working in hierarchical systems. For example, the lawful governance regarding the treatment of detainees could negatively switch to unlawful activities as the proximity of the soldiers to the trainees varies. What once was a lawful command becomes an unlawful command as the intent is interpreted differently through the chain of command.

disengaged from the situation and are performing an immoral act, these individuals must make a decision as to whether to yield to the other members of their team and perform in the same manner or to attempt to uphold their own (possibly minority) standard. One obvious set of questions to ask relates to how to undercut the probability of moral disengagement in military teams. One hypothesis emerging from earlier research reviews is that the promulgation of distinct self-identity may hinder moral disengagement. This, of course, is an empirical question worthy of exploring in and of itself.

Another first person laboratory study could be designed to compare individual and team MEDM. For example, it would be valuable to explore the difference between the moral perceptions of team members witnessing an ethical dilemma alone or with teammates. For example, according to social intuitionist model of ethical judgement, a person who views the dilemma alone can be expected to develop a moral pre-position, or moral intuition (Haidt, 2001), while a person who encounters the dilemma with a team may not have time to develop this pre-position. This pre-positioning of people may arguably have a serious impact on how MEDM occurs within collaborative environments. Does an individual's moral judgement change once he or she becomes part of a collaborative team, and if so, how? And, to what extent are "anchoring" effects likely to impact on the outcome of team deliberations with an ethical component. This kind of research could shed light on what social factors influence the immediate moral and ethical judgement and decision.

In another variation, existing videotape data from CF predeployment training field trials could be incorporated into the first person gaming laboratory, perhaps in a game such as "Never Winter Nights". Presenting predefined segments of negotiations and using a stop-action approach would enable exploration of participants' views of how negotiations are proceeding, and explorations of how they would perform differently (if at all) in the same situation.

Overall, then, many different forms of laboratory research could help explore research questions that demand higher levels of experimental control or questions that would impose too much on training. The first person gaming lab provides a good opportunity to explore MEDM in a controlled simulated environment, as it offers the ability to construct complex tactical scenarios as well as to capture all relevant communications that occur amongst teams.

3.1.5 University-Based Laboratory Experiments (Milestone 9)

The proposed focal areas of this ARP present substantial challenges for collecting data in military teams. Understanding the impact of team diversity on ethical decision-making, for example, is perhaps best accomplished using culturally diverse teams. Although this question is one for which preliminary data may be available from CF predeployment training teams (due to the multinational participants), it is unlikely that a high enough sample size can be achieved through this means alone. As such, given the cultural diversity within many university environments (as well as the limited troops available within the current CF environment due to the pace of operations), it may be more feasible to attempt to help answer some questions within university laboratories before attempting to generalize to the most difficult to attain population of diverse military teams. Laboratory experiments can provide experimental control that is not possible in field settings, as well as enabling the time for more complex data collection (e.g., qualitative data).

In Milestone 9, members of the research team will explore a number of issues associated with MEDM. For example, this could include preliminary research aimed at better understanding the impact of team diversity on MEDM. Research has shown that cultural norms and "culturally shaped emotions" have a broad impact on morality and moral judgement (Haidt, 1993). In laboratory

research, for example, one specific area of focus could explore how cultural diversity manifests itself in a team setting, when teams must work together to resolve a moral dilemma. If a diverse set of participants could be accessed, participants could be divided into homogenous versus heterogeneous teams (e.g., background diversity, gender diversity or ethnic diversity). Each team could be presented (either video-based or text-based) with a moral dilemma scenario. Each team will then be given time to discuss and to propose a solution for the situation.

Teams' MEDM processes could then be explored in detail from beginning to end. For example, the cognitive aspects of team decision-making, such as what is attended to by diverse teams, how information is used, as well as how this information gets combined would be important to tap. Social as well as contextual factors that influence these processes will also be important to consider. The potential power of organizational context and ethos, for example, could exert great influence on how ethical decisions are made within a team context. With members of diverse teams coming from organizations with diverse ethos might make some norms more accessible and more likely to be influential. The power of group processes such as groupthink and social consensus will also be important to understand. Similarly, even individual values have great potential to influence team decision-making in ethical situations.

Ethical decisions are often conceptualized in terms of awareness/perception of a dilemma, the process that is undertaken and the outcome of that process. Research should focus on how members of culturally diverse teams work together to identify and resolve a moral issue. For example, does culture influence the recognition of a moral issue (i.e., does culture impact how soldiers "see" a moral issue), or do people from different cultures identify issues similarly but resolve them differently? Similarly, it would also be possible to explore whether the identification and discussion of multiple perspectives on a moral issue could undercut the potentially negative effects of cultural diversity on effective ethical decision-making. Perhaps diverse teams that are 'forced' to make decisions only after extensive deliberations would show more ownership of the outcome (whether it is positive or negative) even when they have very different value systems and priorities. The primary analyses could focus on the team's MEDM process and the final outcome of the decision-making process. Do Canadian teams and teams from other cultures approach ethical dilemmas differently? If so, then how?

Whatever the case, it seems important to begin to grapple with the impact of multinational issues in MEDM through university-based studies. These, then, could be used to study phenomenon that require relatively high N, and could serve as the basis for further exploration with military samples.

3.1.6 Model Testing and Lab-based Simulation of CF Predeployment Training at a Specific CF Base (Milestone 10)

Milestone 10 will work to use the knowledge gained in this program of research in order to pursue model testing and lab-based simulation of the training provided by a specific Canadian Forces Base (CFB).

A core aspect of this research could be investigating specific factors indicated in the proposed framework of the factors influencing ethical decision-making. One study could re-visit the moral intensity construct (i.e., the vividness and psychological salience of a situation) in a lab-based simulation of a human rights violation scenario similar to one that soldiers might confront in operations or in training for operations. Differences in the perception of moral issues could sometimes be a product of physical proximity, as environmental cues may invoke a different responsiveness to the situation. However, it is unclear exactly what aspects of the moral situation

are the most influential. Does the power of this scenario lie more in the potential for harm, rather than the actual harm that is inflicted? Or alternatively is the physical image of people being beaten most influential, or are their screams for help more powerful?

One way to examine moral intensity using a lab-based simulation is to have one group view the full video of a human rights violation training stand and have another group only read the scenario as if receiving a situation report (sitrep) at HQ. It may be that experiencing the situation, i.e., high moral intensity, compared to merely reading it will produce different moral and ethical judgement and decision-making processes (especially the recognition of a moral issue). A number of dependent variables, such as MEDM process, empathy, etc., could be systematically measured. Understanding the specific features of a situation that influence moral intensity is a potentially important research question, given the increasing emphasis on network-enabled operations. One of the dangers of moving to this kind of operational paradigm is that, in theory, people would be provided with many different forms of information, and much closer psychological proximity to problematic situations. Clearly, both cognitive and affective overload are legitimate concerns and understanding influences on moral intensity would be an important contribution. Another way to cast this research question is to think about the factors that might influence the formation of empathy. For example, does having detailed information about the victims influence perceptions of moral responsibility? And, does the provision of this information make the observer any more likely to behave morally?

The construct of moral intensity is also very relevant in co-located versus distributed teams. When team members are physically separated from one another, they may have a very different view of an ethical situation that they encounter. For example, experiencing moral intensity for team members in the field versus those who are in command HQ may invoke substantively different MEDM processes. Retired LtGen Romeo Dallaire documents a compelling example of the differences in perspectives at the time of the Rwandan genocide, explaining that his perspective was moral while some of his UN administrative colleagues' was political (Dallaire, 2004). This difference in perspectives led to very different operational decisions, despite the extremity of the Rwandan example.

A study exploring distributed teams conducted within a laboratory setting could place teams in separate rooms. Teams could then have a varying degree of accessibility to an ethical dilemma. For example, members of one team may confront the ethical dilemma directly, while members of another team hear only radio reports about it. Again, exploring the levels of moral intensity that respective team members experience as well as the processes by which team members work to resolve the dilemma would be very achievable within a laboratory setting. This kind of research could be extended to systematically address key aspects of the proposed/model framework.

Lab-based simulation of CF predeployment training could also be done in a more holistic way. Current CF predeployment training provides several hours of instruction relevant to negotiation, one's role in non-combat missions, and information relevant to managing uncooperative or distressed individuals. Given the research team's current knowledge about CF predeployment training (and with additional SME assistance), it would be possible to design various "training programs" based on the current curriculum at this training facility, but that provide specific and tailored training in potentially problematic areas[10]. For example, the first field study suggested that some CF trainee teams appeared to have trouble interacting positively with the antagonist who was opposing their efforts, and our report suggested that trainees may benefit with more specific

[10] This kind of approach could target not only "problems" but critical target areas that may not receive enough attention.

instruction in this area. By creating a simulated version of the CF pre-deployment training program that either offers specific enhanced training in areas identified as problematic in previous research, it would be possible to compare the effectiveness of this training with the "baseline" training. For example, if trainees have trouble making the transition to a less aggressive stance when negotiating in highly intense scenario, providing more elaborated training about the need to maintain impartiality, focusing on teaching trainees to recognize when they are agitated (and are more likely to behave too aggressively), may show positive benefits. Training participants using the "enhanced" training package, and then using existing trainee footage (again using a stop-action approach) to understand whether the baseline vs. enhanced training could improve the performance of trainees, would be of value. If useful, this information could then be fed back into the actual CF pre-deployment training system.

3.1.7 Review of Training Procedures Relevant to MEDM (Milestone 11)

Milestone 11 is currently underway. One initiative included a half-day focus group discussion exploring current CF training for MEDM in an operational context (Thomson et al., 2006b). It was convened at CFB Kingston, Ontario with active Commissioned and Non-Commissioned CF Officers who each had operational experiences involving moral and ethical challenges. Participants emphasized the importance of robust MEDM training for CF operational effectiveness. They identified four indirect means of instilling MEDM, which include promoting and instilling CF ethos and identity; learning from CF members' operational experience and providing strong mentorship; evaluating and promoting individuals who consistently demonstrate high ethical conduct; and systematizing MEDM knowledge transfer. Participants also discussed specific requirements for training MEDM. For example, participants argued that training MEDM is required at all rank levels and that it needs to occur regularly, as optimal MEDM cannot be promoted in a "*two-day*" course once every year. Lastly, participants endorsed several direct means of training MEDM in an operational context, which include classroom case study training; live scenario-based training; and computer simulations.

Milestone 11 also could include direct initiatives within the context of CF pre-deployment training. For example, an important piece of work noted at the briefing presented to the outgoing commandant and senior staff officers is the need to validate the behavioural coding scheme used in Milestone 3 and its expanded version currently in use for Milestone 5. This expanded scheme, although very inclusive in order to capture all relevant research dimensions, is likely too large to be relevant to CF pre-deployment field exercises. Therefore, validating it with staff officers ensures more discussion about the kinds of behaviours that are indeed truly optimal and suboptimal to negotiations. Identifying these behaviours can be incorporated into CF pre-deployment field exercises as training points. This validation could give rise to a "checklist" of sorts (e.g., hand held PDA) that is completed by the DS during the scenario and then used for subsequent debriefing. As noted in the report for Milestone 3, this heightened level of consistency across DS and trainees would likely be a very important contribution to CF pre-deployment training.

Another important way to facilitate the development of training procedures would be to follow-up with CF personnel who had received pre-deployment training after they return from their missions to determine how live, realistic scenarios assisted them in the field. What were the features of their training that specifically helped them? What could the CF do to enhance the current training mechanisms? How could they be better prepared? Moreover, following up with CF personnel would provide an opportunity for them to share their experiences of making moral and ethical

decisions in an operational context, so that these accounts can be documented and disseminated throughout the CF.

3.1.8 Documentation of Experimental Results (Milestone 12)

Any programmatic research plan should aim to share its results with broader scientific and military communities. Another important initiative for Milestone 12 is translating the empirical findings into conference presentations and research papers, and progress has already been made. Findings from Milestone 5 were presented at the Symposium of the International Society for Political Psychology in Barcelona, Spain 2006 (Mandel, Vartanian, Thomson, and Adams, 2006). A poster presentation has been given at the 6th Canadian Conference on Ethical Leadership (CCEL) in November 2005, and a poster presentation to report the findings from Milestone 5 (Thomson et al., 2007) has been accepted at the 7th CCEL 2006 as well as a panel presentation to report the findings from the in-person interviews with senior commanders who had faced moral and ethical dilemmas in operations (Thomson et al., 2006a).

For the future, many other conference presentations could be pursued by the research team. Efforts could be made to present the findings of the research program to an international military audience at the annual International Society for Military Ethics (ISME; previously Joint Services Conference on Professional Ethics, JSCOPE), which is an organization of military professionals, academics and others formed to discuss ethical issues relevant to the military. The ISME meets each year in late January in Washington, D.C., to present and discuss academic papers on a variety of moral and ethical topics in a military context.

In terms of publications, efforts are already underway to write academic papers presenting the results of the first field study (Milestone 3). Other relevant journals could include Military Psychology, or even more widely distributed military journals that could be used to articulate the current framework for ethical decision-making in military contexts, such as the Journal of Military Ethics.

As well, it is important to retain "corporate" knowledge of the activities of the research program in the event that future researchers seek to replicate previous work. Documenting all the materials procedures, data, etc, can be achieved using a software system such as *PI Assist* (NTT Systems Inc., 2005*)*. This is currently underway for the first field study, and should be completed by all members of the research team.

And, as this Applied Research Program proceeds, it would be ideal to work toward establishing annualized funding in order to provide the resources necessary for a longer program of research to evolve. In this sense, it may be advantageous to have a central repository of information (both hard and soft copies) related to this project, and that an up-to-date listing of presentations, reports and papers is maintained, as well as the relevant research and theory articles used in the creation of these reports. This repository could also include other critical data (e.g., videotapes from the field studies). As the research program proceeds, it will also be important to take and collect photographs and resources that track the progress of the research program. All of these efforts should feed naturally into seeking additional sources of funding at the end of the 3-year ARP.

3.1.9 Proposal and Guidelines for Development of MEDM Training Procedures (Milestone 13)

Of course, the ultimate goal of the ARP is to provide usable information back to the CF about how best to promote optimal MEDM. Milestone 13 takes the information gained from all of the proposed research, and will work to provide practical suggestions about how the CF could enhance MEDM training. This stage, then, represents the culmination of empirical findings and emerging ideas from the ARP.

Some progress has already been made distributing the results of this program of research to the CF. One important contribution is the inclusion of two key documents (Thomson et al., 2005; Thomson et al., 2006a) into the reading list of the Advanced Military and Strategic Course (AMSC) at Canadian Forces College (CFC) in Toronto. Another contribution includes the report detailing points raised in the focus group discussion with CF Non-commissioned officers (NCO) and Commissioned Officers (CO) regarding current CF training for MEDM in an operational context (Thomson et al., 2006b). Again, CF members identified a number of direct and indirect mechanisms that could be furthered to ensure CF training in this domain is disseminated to all members of the forces on a regular basis. Once these mechanisms are in place, the research team can work with the CF to develop measures to reliably assess the effectiveness of this kind of training.

As the ARP proceeds, it will be important to consider how the work can contribute to training, and the means by which its knowledge can best be transferred. One possible direction is to broaden our knowledge about MEDM in other contexts. Currently, we have a good basis of knowledge of training in the Army context. However, if we hope to generalize our work beyond this context, more attention will need to be given to MEDM in other elements, such as the Air Force and Navy.

3.2 Other Recommendations

In retrospect, one critical limitation of the interview study (Thomson et al., 2006a) was that all of the participants were officers serving at a high level of command (e.g., force commanders) during Peace Support Operations (PSO). At this level, senior CF commanders clearly faced many difficult moral and ethical decisions. As our program of research has evolved, however, it is also clear that ethical situations can exist and related decisions made at much lower levels of command. In increasingly chaotic situations, the rules of engagement that would normally guide more junior individuals may not have the same power. Yet, these people are clearly sometimes in positions where the rules of engagement do not necessarily provide a clear basis for action. As such, one possible avenue for further exploration could involve an interview study exploring moral and ethical dilemmas with NCOs. This study could explore the nature of the ethical dilemmas faced by individuals at these lower levels, and the relative roles of self-identity, intuition and emotion. This study should also explore the training that NCOs had received as well as to elicit their ideas about what kind of training they feel would be most helpful for future soldiers confronted with similar situations.

In order to minimize the strain on training resources, at least one CF training facility has indicated its interest in increasingly systematizing their efforts to understand whether critical training goals have been achieved. One possible way to do this is to pre-screen potential candidates before they enter the training regimen. Some trainers have noted the importance of being able to select

individuals who are likely to benefit maximally from training.[11] Given increasing training demands and strained resources, their specific goal would be to identify individuals that are likely to be maximally effective operators in a variety of missions, such as combat, peacekeeping, reconstruction efforts, etc. If deemed as an important contribution, then, providing assistance in the creation of a screening tool could be another focus of the ARP. From the perspective of this research program there might be a benefit in being able to identify candidates who are likely able to make effective moral and ethical decisions in operational contexts. From the perspective of the CF, being able to identify the personnel who are best suited to performing a mission likely to have high ethical demands, for example, would be a critical help. This is likely to be a challenge, however, as existing measures have not typically been derived in contexts that are relevant to the CF. As Young and Baranski (2003) showed, there are few existing measures of MEDM, and the ones that exist do not appear to have been subjected to extensive validation efforts. Moreover, very few seem capable of addressing the fullness of the moral and ethical decisions made in operational contexts. This is both a challenge and an opportunity, as it may be possible to develop measures that are better able to capture the complex nature of ethical decisions in military contexts with the expertise inherent in our research team.

It will also be important to build relationships with partners in academic, applied and military institutions. To date, for example, there has been collaboration with a research team at Columbia University and other partnerships might also be desirable and possible. In order to maximize the ability of this program of research to address the needs of the CF, it is critical to ensure regular interfacing with the CF as well as with other CF agencies that work toward promoting the best possible MEDM. In the long term, this would include building a relationship with the Defence Ethics Program as well as the Army Ethics Program and/or researchers doing work in similar areas at the Canadian Forces Leadership Institute (CFLI) or Royal Military College (RMC). These collaborations will potentially be important for helping to distribute the knowledge gained to the military personnel that need it most. Moreover, relationship building might alleviate the perpetual challenge in getting participants for research. The research team should consider making the current first person computer lab “portable”, so that in cases where participant travel is a challenge, the research team can eliminate this hurdle. It also provides a good opportunity to expand outward into the CF community, furthering relationships and demonstrating good will to the military establishment.

3.4 Overview of Outcomes

This program of research has the potential to provide important information to the CF about how individuals and teams make difficult moral and ethical decisions. This information has the potential to impact positively in several different areas, spanning the continuum from basic to applied research.

In our view, the proposed research plan has the potential to contribute on several fronts. First, the research defined in the initial ARP proposal (and further elaborated here) represents an important step beyond existing academic research. The proposed work will be undertaken in as realistic a domain as possible and will be conducted using realistic scenarios and techniques that present highly important and relevant ethical decisions. The current academic literature, although

[11] While this need does not speak directly to MEDM, it does speak indirectly.

informative, generally presents relatively artificial scenarios with few clear links to the military realm.

Secondly, the proposed applied research program also has the potential to contribute both directly and indirectly to promoting operational effectiveness within the CF. In terms of direct contributions, the proposed plan has the potential to promote a systematic refinement of training in this area through the findings of this research and their translation into the scientific literature. Moreover, by continuing to build relevant partnerships, the research team will hopefully continue to be able to ensure that the results of the research program as they evolve will be distributed to CF personnel in a timely fashion in order to assist them as they continue to face difficult ethical decisions in highly complex environments.

3.5 Summary

Clearly, as this document shows, there are many possible research questions that could be addressed in this program of research, and many more equally important issues that could not be given specific attention due to time constraints. We identified four potential psychological constructs, self-identity, team diversity, collaborative processing, and moral disengagement, which appear to be gaining increasing attention in the area of moral psychology. We further detailed the most recent literature pertaining to each and indicated a number of ways in which this can be explored in field studies, first person gaming studies, and university lab based studies. Our hope is that this document will serve as a helpful "jumping-off" point for the MEDM research team and enable productive discussion around exactly how the ARP should be targeted.

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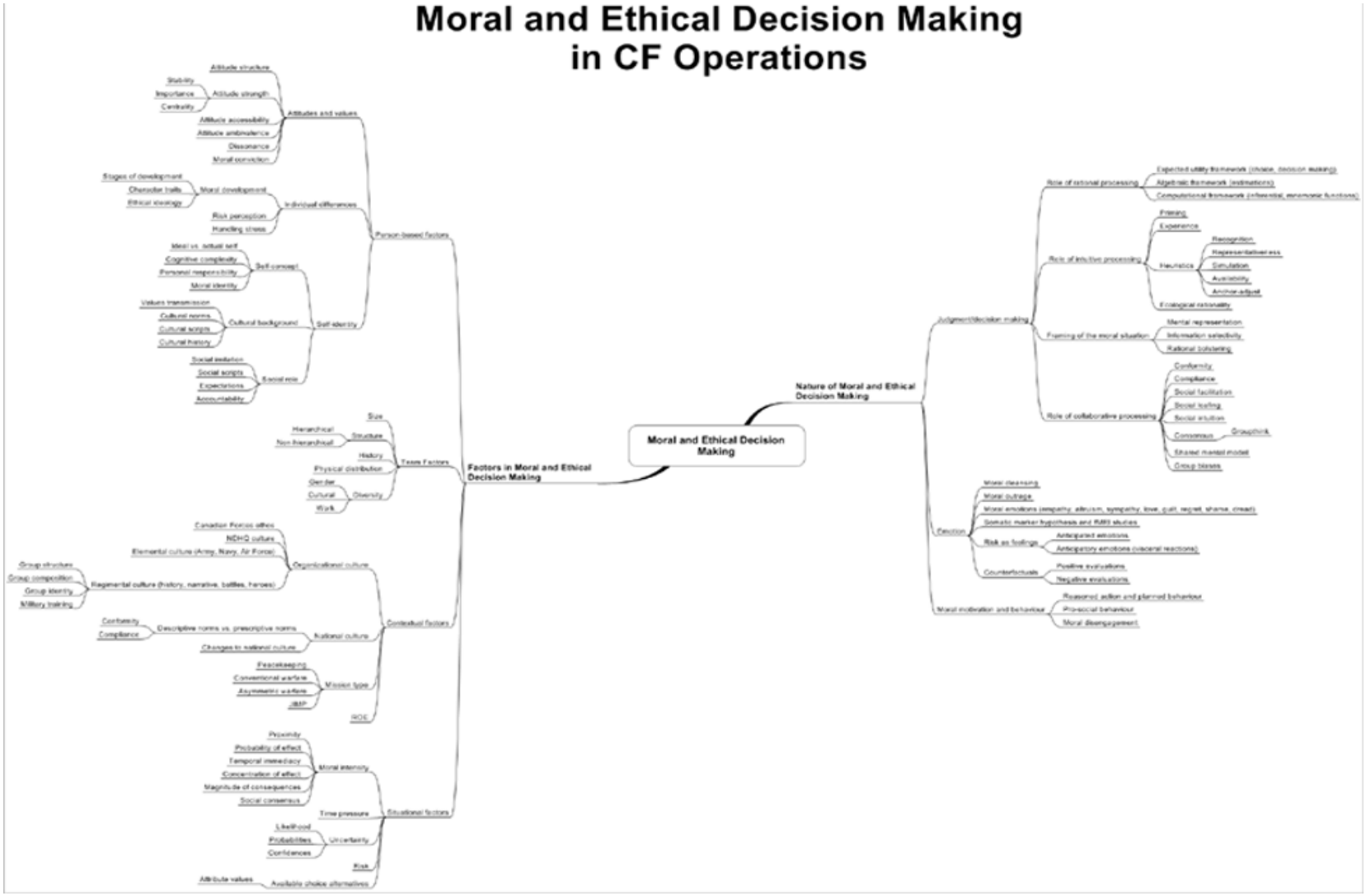

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(U) DRDC Toronto has an ongoing commitment to investigating moral and ethical decision−making (MEDM) in Canadian Forces (CF) operations. Several projects had been previously funded through the Technology Investment Fund (TIF) awarded to the research team from the Command Effectiveness and Behaviour (CEB) section. This work has recently been extended into a 3−year Applied Research Program to further explore MEDM in operational contexts. This report proposes research ideas that could be explored in the context of this 3−year Applied Research Program (ARP). This research agenda is driven by two compatible motives: (1) to remain systematic and theory oriented and (2) to contribute to the CF's operational readiness in the domain of MEDM.

The work on this research plan began with brainstorming a wide range of topics relevant to moral and ethical decision−making. Many of these topics derived from previous research exploring MEDM (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) and from focus group discussions with the DRDC Toronto MEDM Team. These research areas included person−based factors, team factors, contextual factors, situational factors, judgement and decision−making, emotion, and moral motivation and behaviour. Based on this initial "mapping" of the target domain, these broad areas were then narrowed to several focal areas, based on the following criteria: 1) their ability to contribute to the operational effectiveness of Canadian Forces; 2) their ability to contribute to the broader MEDM literature, and 3) on the skills and interests of the research team. Proposed focal areas include self−identity (person−based factor), team diversity (team factor), the role of collaborative processing (judgement and decision making), and the process of moral disengagement (moral motivation and behaviour). This report identifies potential research questions that could be explored in each focal area, as well as considering specific research approaches that could be used to explore MEDM in an operational context. Finally, this report outlines the expected outcomes of this research program.

(U) RDDC Toronto effectue en permanence des recherches sur la prise de décisions morales et éthiques (PDME) dans le cadre des opérations des Forces canadiennes (FC). Plusieurs projets ont déjà été financés par le biais du Fonds d'investissement technologique (FIT) octroyé à l'équipe de recherche de la Section de l'efficacité du commandement et du comportement (ECC). Ce travail a récemment été transformé en un Programme triennal de recherches appliquées (PRA) afin d'investiguer plus en profondeur la PDME dans des contextes opérationnels. Le présent rapport propose des idées de recherche qui pourraient être explorées dans le cadre du Programme triennal de recherches appliquées (PRA). Ce programme repose sur deux objectifs compatibles : (1) demeurer méthodique et axé sur la théorie; (2) participer à l'état de préparation opérationnelle des FC dans le domaine de la PDME.

Le travail sur ce plan de recherche a débuté par l'exploration de toute une panoplie de sujets sur la prise de décisions morales et éthiques. Nombre de ces sujets provenaient de recherches antérieures sur la PDME (Thomson, Adams, & Sartori, 2005; Thomson, Adams, & Sartori, 2006a; Thomson & Adams, 2007) et de groupes de discussion associés à l'équipe de la PDME de RDDC Toronto. Les domaines de recherche comprenaient les facteurs personnels, les facteurs collectifs, les facteurs contextuels, les facteurs circonstanciels, le jugement et la prise de décisions, l'émotion ainsi que la motivation et le comportement moral. Une fois établis, ces grands domaines ont été ramenés à plusieurs domaines d'intérêts plus petits, reposant sur les critères suivants : 1) leur capacité à

participer à l'efficacité opérationnelle des Forces canadiennes; 2) leur capacité à participer à la documentation sur la PDME; 3) les compétences et les intérêts des membres de l'équipe de recherche. Les domaines de recherches proposés comprennent l'image de soi (facteur personnel), la diversité dans l'équipe (facteur collectif), le rôle du traitement coopératif (jugement et prise de décision) et le processus du désengagement moral (motivation et comportement moral). Ce rapport identifie les questions de recherche éventuelles susceptibles d'être explorées dans chaque domaine d'intérêt, de même qu'il tient compte des approches particulières pouvant être utilisées pour explorer la PDME dans un contexte opérationnel. Enfin, il met en lumière les résultats attendus du programme de recherche.

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(U) moral and ethical decision−making; Canadian Forces (CF) operations; potential research questions; expected outcomes; operational effectiveness